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ABSTRACT

Among the purposes of this study were: (1) to investigate, in a small number of institutions with differing characteristics, what on-campus and off-campus groups perceive the goals of their institutions to be, as well as what they believe their goals should be; (2) to evaluate whether the Delphi technique produces opinion convergence among different on-campus and off-campus groups with regard to an institution's goals; (3) to provide the documentation necessary for the Regional Education Laboratory of the Carolinas and Virginia (RELCV) to replicate the study in other institutions; and (4) to evaluate how well the preliminary form of the Institutional Goals Inventory can assess an institution's goals. This report is primarily concerned with the last three objectives. It presents: (1) the background of the study, including its relationship to RELCV Administrative-Organizational Systems (AOS) model, the development of the Institutional Goals Inventory, and a review of the Delphi technique; (2) the method; (3) the results and a discussion, including the percent of questionnaires returned, reliability estimates of goal areas, institution and group comparisons, and evaluations of the Inventory, and the Delphi technique; and (4) a summary of the results, conclusions and implications--which indicated that the instrumentation and techniques used in this study to assess the present and preferred goals of five institutions were successful. (AF)

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ENCOURAGING CONVERGENCE OF OPINION, THROUGH THE USE OF THE DELPHI TECHNIQUE, IN THE PROCESS OF IDENTIFYING AN INSTITUTION'S GOALS

Norman P. Uhl

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
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EDUCATIONAL TESTING SERVICE
PRINCETON, NEW JERSEY

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Encouraging Convergence of Opinion, Through the Use of the Delphi Technique, in the Process of Identifying An Institution's Goals

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TABLE OF CONTENTS

	PAGE
Introduction and Purpose	1
Background	2
Relationship to the AOS	2
Development of an Institutional Goals Inventory	4
Review of the Delphi Technique	9
Method	12
Results and Discussion	18
Percent of Questionnaires Returned	18
Reliability Estimates of Goal Areas	25
Institution and Group Comparisons	27
Evaluation of the Institutional Goals Inventory	35
Evaluation of the Delphi Technique	41
Investigation of Convergence	41
Types of Judgments Involved	49
Accuracy of Convergence	55
Summary of Results, Conclusions, and Implications	63
Institutional Goals Inventory	63
Delphi Technique	65
General Conclusions	66
Limitations	67
Implications	68
References	71
APPENDIXES	
A: Areas Represented on the IGI	73
B: IGI - Preliminary Form	79

PAGE

C: Instructions for the Second and Third Administrations of the IGI 95

D: Descriptions of Participating Institutions 99

E: Detailed Procedure of Study 109

F: Correlations Among Goal Areas 119

G: Bibliography of Studies Related to the Delphi Technique . 123

LIST OF TABLES

TABLE		PAGE
1	Number of questionnaires originally sent and the number and percent returned from all institutions	19
2	Number of questionnaires originally sent and the number and percent returned from institution 1	20
3	Number of questionnaires originally sent and the number and percent returned from institution 2	20
4	Number of questionnaires originally sent and the number and percent returned from institution 3	21
5	Number of questionnaires originally sent and the number and percent returned from institution 4	21
6	Number of questionnaires originally sent and the number and percent returned from institution 5	22
7	Reliability estimates of goal areas for each questionnaire .	26
8	Means and standard deviations of present importance of each goal area for each institution and results of independent ratings for each goal area	38
9	Summary of significant results from Manova using repeated measures design by goal areas for present importance ratings	43
10	Summary of significant results from Manova using repeated measures design by goal areas for preferred importance ratings	44
11	Measures of similarity among schools as indicated by Spearman rank-order rhos based upon present and preferred importance ratings from questionnaire 1	53
12	Measures of similarity among schools as indicated by Spearman rank-order rhos based upon preferred importance ratings from questionnaire 1 and questionnaire 3	62

LIST OF FIGURES

FIGURE		PAGE
1	Profile of institution 1 comparing mean responses to present and preferred importance of goal areas from third questionnaire	28
2	Profile of institution 2 comparing mean responses to present and preferred importance of goal areas from third questionnaire	29
3	Profile of institution 3 comparing mean responses to present and preferred importance of goal areas from third questionnaire	30
4	Profile of institution 4 comparing mean responses to present and preferred importance of goal areas from third questionnaire	31
5	Profile of institution 5 comparing mean responses to present and preferred importance of goal areas from third questionnaire	32
6	Variability of the ratings of importance on questionnaires 1 and 3 for each institution and each goal area - present importance	45
7	Variability of the ratings of importance on questionnaires 1 and 3 for each institution and each goal area - preferred importance	47
8	Plot of group means indicating a group's perception of the present importance of religious orientation goals for institution 5	58
9	Plot of group means indicating a group's perception of the present importance of religious orientation goals for institution 1	59
10	Plot of group means indicating a group's perception of the present importance of religious orientation goals for institution 4	60

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Introduction and Purpose

During the past five years, higher education institutions have felt a crisis of authority and confidence both on and off campus. On the one hand, the younger generation takes nothing for granted. Radicals view the higher education institution as a means of forging a new society. On the other hand, politicians and taxpayers perceive the institution as being unable to manage its affairs. Conservatives look to the higher education institution as an instrument for sustaining and strengthening our present society. The intensity with which higher education institutions are being pulled and tugged by these different groups not only stresses the importance of assessing what these groups want from colleges and universities but also indicates the importance of identifying a technique which would develop some convergence of opinion among different groups concerning many of an institution's goals.

With these needs in mind, this study was conceived and designed by the author, while he was a research psychologist with the Educational Testing Service (ETS), and proposed to the Regional Education Laboratory for the Carolinas and Virginia (RELCV) for possible funding. RELCV decided that the results from the study would be useful in the development of their program of Administrative-Organizational Systems and therefore agreed to financially support the study. The project started in November 1969. There were several purposes for the study: (1) to investigate, in a small number of institutions with differing characteristics, what on-campus and off-campus groups perceive the goals of their institution to be, as well as what they believe the goals should be; (2) to evaluate whether the Delphi technique produces opinion convergence among different on-campus and off-campus groups with regard to an institution's goals; (3) to provide participating institutions with the

results of the study for their own purposes in self-evaluation; (4) to provide the documentation necessary for RELCV to replicate the study in other colleges or universities; (5) to evaluate how well the preliminary form of the Institutional Goals Inventory can assess an institution's goals; (6) to provide information which would be helpful to RELCV in revising and augmenting RELCV's Administrative-Organizational Systems. This report will be primarily concerned with objectives 2, 4, and 5. The data for purposes 1 and 3 have been included in the project reports to each institution (Uhl and Hopkins, 1970 a, b, c, d, e, f) and will be only briefly discussed in this report. Both this report and the reports to the institutions provide information for objective 6.

Background

This section briefly presents three areas which may provide a better understanding of the study, namely: (1) the relationship of this study to RELCV's Administrative-Organizational Systems (AOS) model; (2) a review of available instruments to measure an institution's goals including the development of a preliminary form of an Institutional Goals Inventory; and (3) a review of the Delphi technique, as a means of obtaining convergence of opinion.

Relationship to the AOS

The RELCV AOS is a systems approach that will be applicable to institutions of higher education for the primary purpose of providing an efficient method of allocating resources to achieve specified goals. One of the first steps toward the realization of such a system is the ability to identify goals considered to be of prime importance by relevant on- and off-campus groups such as faculty, students, administrators, community, trustees, alumni, etc. Of course, it is easier to decide upon these goals when there is a consensus among these groups about their importance. After this initial screening of

goals it is then possible to link measurable objectives to those goals identified as most important and develop strategies for obtaining these objectives. By evaluating each strategy in terms of resources needed and possible outcomes, a plan of action can be determined. Since the chosen strategy is linked to a measurable objective, it will be possible to evaluate how well the plan of action attains the objective.

To support the above process certain capabilities and/or procedures must exist or be developed in an institution. Some examples are: a procedure for clarifying one's goals; the ability of deriving measurable objectives from these goals; the ability to provide the necessary information in order that personal and financial resources can be allocated to support the agreed-upon objectives; the ability to use inputs from all levels in planning and decision-making, in addition to the ability to obtain support from decisions made using these inputs; and proper evaluation of the degree to which the objectives are attained. A major purpose of the AOS is to provide models by which institutions can obtain these capabilities. The AOS also provides an information system where the relevant data from the above models would be readily available to assist in decision-making. Thus a college or university employing the AOS might expect to achieve the following outcomes: (1) develop goals that accomodate needs of diverse constituencies and conflicting societal demands; (2) conduct systematic planning relative to the achievement of defined goals based on research, past experience, and continuous evaluation; (3) allocate resources in a manner consistent with goals, and use resources efficiently to achieve specific objectives; (4) involve administrators at all levels in this continuing decision-making process; and (5) maintain a high degree of support among diverse constituencies in the achievement of goals and objectives.

One of the major steps in the development of the AOS is to provide to institutions the capability of identifying the most important goals not only as presently perceived by different groups, but also as what these groups would desire them to be. In addition, if improving communication among groups can lead to a more informed opinion and thus to greater agreement on the priority of goals, the complexity of the remaining processes decreases significantly.

Thus, two main purposes of this study have a major impact on the development of the AOS; namely, (1) evaluation of a procedure for obtaining from different on-campus and off-campus groups their perceptions of the present goals of their institution, as well as what they believe the goals should be and (2) evaluation of a procedure for obtaining convergence of opinion with regard to the importance of these goals.

Development of an Institutional Goals Inventory

As Peterson (1970) has stated in his recent "state-of-the-art" paper on institutional goals, ". . . . diverse colleges must be able to articulate their unique goals in ways that are meaningful to their constituencies and other supporters if they are to expect continuation of the support necessary for their survival." Thus, in making decisions about goal priorities, it is important to consider the views of such groups as students, faculty, administrators, alumni, and trustees, as well as specific groups outside the academic community.

Certainly, personal declarations about purposes in higher education are available. For example, one recent collection is entitled Whose Goals for American Higher Education? (Dobbins and Lee, 1968). Within this volume, Philip Werdell argues for teaching and learning as the basic functions; Lyle-

Spencer argues for research -- "balanced" and unclassified; John Corson, for public service; Kenneth Keniston, for social criticism; and Walter Lippman, for spiritual and intellectual guidance for the nation. While these personal declarations can be helpful, an institution which desires to identify the important goals of different groups that it serves, needs an efficient method for obtaining this information. Several studies have been performed recently which attempt through the use of a questionnaire to identify the goals of higher education institutions.

The published work of Gross and Grambsch (1968) stands as the most significant empirical effort thus far to examine the nature of university goals--specifically, as these existed (in 1964)[1] in the minds of the faculty and administrators at 68 nondenominational, Ph.D.-granting universities in the country. Gross and Grambsch used an inventory consisting of 47 goal statements, 17 of which dealt with "output" goals (preparing students, doing research, providing public service) and the remainder with "support" goals (holding staff, involving faculty in university governance, etc.). Respondents rated the goal statements in terms of perceived importance (each as is and as should be) at the respondent's university. Based on 51 and 40 percent return rates for faculty and administrators respectively, it was found that the statement "protect the faculty's right to academic freedom" (a "support" goal) was ranked highest by the combined groups both as an actual and as a preferred goal. Generally differences in goal definitions between faculty and administrators were concluded to be negligible.

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[1]It was recently announced in The Chronicle of Higher Education (1971b) that the Ford Foundation will support a new study of university goals by Gross and Grambsch for the purpose of updating their 1964 results.

The Gross and Grambsch study is an important one but only investigates university goals. As the authors state: "It must be borne in mind that they (the goals) apply to universities only, and not to other types of higher educational institutions."

The Danforth Foundation (1969) conducted a study using a shortened and revised form of the Gross and Grambsch inventory. It was administered to a sample of administrators, faculty, and students at 14 private, liberal arts colleges. This study was designed to assist these institutions in identifying their goals and, by comparing their results with those obtained by Gross and Grambsch, to determine if a difference in goals existed between universities and small private, liberal arts colleges of limited resources. Significant agreement was found among administrators, faculty, and students on most matters relating to college goals and governance in this study. The differences which existed between "is" and "should be" responses also indicated that the three groups shared common views on the direction of many of the desired changes.

In another study, a group from the Bureau of Applied Social Research at Columbia University sent a form containing 64 goal statements to the academic dean of each college in the country. The deans indicated the extent to which their colleges "emphasized" each goal. In general, the results demonstrated the fact of different goals for different types of institutions, although certain of the goal statements were "strongly emphasized" universally, e.g., "To improve the quality of instruction," and "To increase the number of books in the library" (Sieber et al., 1968). Through factor analysis, the various goals were found to be interrelated in such a way that five broad "goal structures" (factors) were identified and labeled as follows: Orientation toward Research and Instruction, Orientation toward Instrumental Training, Orientation toward Social Development of Students, Democratic Orientation

(participatory campus governance), and Orientation toward Development of Resources. Since this study was designed only for academic deans, the goals which it identifies may not represent well the goals of other important on-campus and off-campus groups.

Analysis of college goals was one aspect of the recently completed Project on Student Development conducted by and at 13 of the member colleges of the Council for Advancement of Small Colleges (CASC). All faculty members and administrators ranked 25 stated characteristics of graduates (e.g., "competent in both oral and written communication," "guided by God's will") in terms of "importance for the graduates of your institution." On the basis of these beliefs, the project staff was able to divide the thirteen colleges into four categories: Christ-Centered, Intellectual-Social, Personal-Social, and Professional-Vocational (Chickering, 1968).

While the above instruments were designed to assess an institution's goals as seen by different groups, each instrument was developed for a specific type of institution (e.g., universities) and/or specific types of respondents (e.g., administrators or faculty). It would be advantageous for the purpose of this study to have a single instrument which would identify the most important goals for either a four-year college or a university as seen by both on- and off-campus groups. Educational Testing Service had been conducting various studies and literature reviews during the eighteen months previous to the proposal of this study in preparation for the construction of such an instrument. This project provided the impetus needed for ETS to develop a preliminary version of this instrument (an Institutional Goals Inventory). All work on the Institutional Goals Inventory (IGI) was funded completely by ETS and was a separate project from this study which was supported by RELCV. However, to provide continuity between the two projects, the author served

as chairman of the ETS Task Force[2] to develop the preliminary form of the IGI as well as project director of this project.

The items used in the preliminary form of the IGI, a copy of which is in Appendix B, were developed by the ETS Task Force from a review of empirical studies such as performed by Gross and Grambsch (1968), Sieber et al (1968), the Danforth Foundation (1969), etc., statements by activists and minority groups, and key "personal declarations" about purposes in higher education - such as presented by Dobbins and Lee (1968). Also, recent statements of higher education goals by boards of higher education, inter-university groups, and social philosophers were studied in an attempt to cover societal goals that institutions might well aspire to, even though not seeking them presently. With this information providing a background, the Task Force identified eighteen goal areas: intellectual development of the student, personal development of the student, vocational preparation, religious orientation, training of graduate and professional students, research, local and regional service, national and international service, social criticism, freedom, innovation, governance, self-study and planning, egalitarianism, esprit and quality of life, concern for projecting good image, financial soundness, and non-academic activities. Several items were written to represent each goal area. These items were then reviewed by both ETS and non-ETS consultants.[3] On the basis of these reviews, the Task Force modified, omitted, and added items. Two additional items were included which could not readily be classified under any

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[2] In addition to Uhl, other members of this ETS Task Force were J. A. Davis, Robert Feldmesser, Richard Peterson, and Jonathan Warren.

[3] Serving as outside consultants were: Dr. Roger Kelsey, head of the Higher Education program at the University of Maryland; Dr. Earl McGrath, director of the Center for Higher Education at Temple University; Dr. Edward Nelsen, director of the Bureau of Evaluation and Research at North Carolina Central University; Dr. Ernest Palola, research sociologist for the Center for Research and Development in Higher Education at the University of California at Berkeley; and Dr. John Roueche, former director of the Junior and Community College Division of the Regional Education Laboratory for the Carolinas and Virginia.

of the above areas making a total of 105 items. Appendix A groups the goal statements under the above goal areas.

For each goal statement, the respondent checked the degree of importance for the institution on a five point scale ("of extremely high importance", "of high importance", "of medium importance", "of low importance", "of no importance"). All groups responded to the goal statements both in terms of perceived existing goals and in terms of beliefs about what the institution's aims ought to be.

In general, on-campus groups responded with reference to their institution, while off-campus groups responded with reference to the local institution being rated. The directions for completing the instrument and providing feedback to the participants were modified to meet the specific objectives of each administration of the questionnaire.

Review of the Delphi Technique

The Delphi technique is a procedure originally developed by the RAND Corporation for obtaining greater consensus among experts about urgent defense problems without face-to-face discussion. Of course, face-to-face discussion is the usual procedure for combining individual opinions. However, for some time it has been known that there are serious problems associated with this mode of communication (Kelley and Thibaut, 1954). Some examples of these problems follow. 1. Group opinion is highly influenced by dominant individuals who usually talk the most. Yet, there is very little correlation between pressure of speech and knowledge. 2. Much discussion in group situations, while sometimes appearing to be problem oriented, is often irrelevant or biasing because in many instances it is usually concerned with individual and group interests rather than with problem-solving. 3. Group pressure to conform can distort individual judgment as demonstrated by Asch (1958).

Thus it is not very surprising that the RAND Corporation found, using almanac-type questions, that "after face-to-face discussion, more often than not the group response is less accurate than a simple median of individual estimates without discussion" (Dalkey, 1969).

The objective of the Delphi technique is to obtain consensus of opinions without bringing the experts together in a face-to-face meeting; this is achieved by having them complete a series of questionnaires interspersed with controlled opinion feedback. Not only can this mean a savings in time and money, but also, and more importantly for this study, this mode of controlled interaction among the respondents is considered necessary for independent thought on the part of the participants and helpful to them in the gradual formation of a considered opinion. In addition it has the added advantage of providing anonymity to the participants. This is in contrast to direct confrontation as in a faculty meeting which in too many instances causes hasty formulation of preconceived notions, an inclination to close one's mind to novel ideas, a tendency to defend a previously taken stand, or a tendency to be influenced by persuasively stated opinions of others.

The general procedure for the Delphi technique is as follows: (1) the participants are asked to list their opinions on a specific topic, such as scientific predictions or recommended activities; (2) the participants are then asked to evaluate the total list by a criterion, such as importance, chance of success, etc.; (3) each participant receives the list and a summary of responses to the items and, if in the minority, is asked to revise his opinion or indicate his reason for remaining in the minority; and (4) each participant again receives the list, an updated summary, minority opinions, and a final chance to revise his opinions.

A number of studies employing the Delphi technique have been performed by the RAND Corporation. One example was its use in conducting an extensive survey on predicted long-range developments, some as far as fifty years into the future, in such areas as scientific breakthroughs, population growth, automation, space progress, probability and prevention of war, and future weapon systems (Gordon and Helmar, 1966). A summary of responses from each round of questionnaires was fed back to the respondents before they replied to each succeeding round of questionnaires. Results using the Delphi technique indicated a number of areas of interest: the contents of the predictions themselves, the bases on which respondents claimed their predictions were made, the spread of experts' views, the consistent convergence of views following data feedback, and the experts' critiques of one another's views.

Another study using the Delphi technique was reported by Pfeiffer (1968) and was not concerned with long-range predictions but with developments in the near future. Thus the accuracy of the predictions could be verified. In this study conducted at U. C. L. A. in 1965, 20 students forecasted 16 business indexes, such as gross national product, defense expenditures, etc., using the Delphi technique. Another twenty students filled out non-Delphi questionnaires, asking for forecasts only. Of the two groups, the Delphi students' predictions were more accurate for 14 of the items, the non-Delphi group did better on two items, and in one case both groups made the same prediction. Thus the Delphi technique was not only successful in obtaining a consensus on many items, and at least a majority opinion and a clearly defined minority opinion on others, but also produced more accurate responses.

The RAND Corporation (Dalkey, 1969) has also conducted some studies comparing face-to-face discussion with the controlled-feedback interaction of

the Delphi technique using almanac-type questions. Dalkey reports: ". . .more often than not, face-to-face discussion tended to make the group estimates less accurate, whereas, more often than not, the anonymous controlled feedback procedure made the group estimates more accurate" (Dalkey, 1969).

Some recent applications of the technique have been made in the area of education. Cyphert and Gant (1971) used the technique to assist in identifying goals for the School of Education at the University of Virginia. Anderson (1970) assisted a county school district in identifying its goals by the Delphi technique while Norton (1970) assisted in identifying the needs for a newly planned university. Judd (1970) reports that through the use of the Delphi technique, a highly innovative and experimental type of curricula program was adopted by an extremely conservative faculty.

A bibliography of research publications concerning the Delphi technique is included in Appendix G.

Method

Since the procedure employed in this study was rather complex, only a general description is presented below to give the reader an overview of the project. For those desiring greater detail and to satisfy the objective of providing documentation for the replication of this study, Appendix E presents chronologically the steps employed in the study.

Five institutions were selected by ETS and RELCV from the Southeast to represent institutions which differed on the following dimensions: public vs. private, college vs. university, large vs. small, and predominantly Caucasian vs. predominantly Negro. A description of each of these five institutions is included in Appendix D.

Representatives of the following on-campus and off-campus groups were included: students selected using stratified random sampling in order that, whenever possible, a male and female were included from each department; faculty selected using stratified random sampling in order that, whenever possible, each departmentwas represented; all academic administrators; a sample of active trustees selected by the institution; a sample of active alumni selected by the institution; at two institutions, parents of the students included; and leaders of different community groups, such as local political, occupational, religious, and minority groups, as well as the community mayor and newspaper editors.

The development of the goals instrument itself was a separate ETS project and is described in the Background section of this report. It was a result of ETS's continuing developmental work toward an Institutional Goals Inventory (IGI).

Instructions to accompany the preliminary form of the IGI used in this study were developed to adapt the instrument to the Delphi procedure. These different instructions accompanied each administration of the IGI and are included in Appendix C.

The general procedure for the Delphi technique is as follows:

1. the participants are asked to list their opinions on a specific topic, such as scientific predictions or recommended activities;
2. the participants are then asked to evaluate the total list by a criterion, such as importance, chance of success, etc.;
3. each participant receives the list and a summary of responses to the items and, if in the minority, is asked to revise his opinion or indicate his reason for remaining in the minority; and

4. each participant again receives the list, an updated summary, minority opinions, and a final chance to revise his opinions.

In this study, step 1 was omitted; the participants were not asked to list their opinions as to what goal statements should be included in the study. Instead, the preliminary form of the Institutional Goals Inventory, previously described, was used. With almost 1000 participants, step 1 was considered impractical. Step 2 involved sending the questionnaire at the beginning of March, 1970, and asking each participant to check the degree of importance of each goal statement both in terms of perceived existing goals (How important is the goal at this institution at the present time? Consider the institution as a whole in making your judgment.) and in terms of beliefs about what the institution's goals ought to be (In your judgment, how important should the goal be at this institution?). Space for comments was provided for each goal statement in order that a participant who was having difficulty with a particular statement could make the problem known to the researcher. In addition, space was provided at the end of the instrument for any participant to add and rate goals which he felt had not been covered. Nine hundred eighty-nine questionnaires were sent to members of the different groups described earlier with instructions to return the completed questionnaire within five days. The data from each institution were analyzed separately to determine the two modal responses per goal statement, one for the "is" rating, the other for the "should be" rating. These modal responses were used in the third step of the Delphi technique (the second step in this project).

According to the third step of the general Delphi procedure, each participant receives the list of items and a summary of responses to the items and, if in the minority, is asked to revise his opinion or indicate his reason

for remaining in the minority. With one modification, this was the objective of the second questionnaire which was delivered at the beginning of April to each participant. The second questionnaire was similar to the first except that the response block associated with the modal category of importance was circled in red. If the number of responses to another category of importance did not differ by more than 10% from the number of responses to the modal category, that category was also circled in red. However, in contrast to the normal Delphi procedure, the participant's previous response was not indicated. Emphasizing a participant's previous response, especially when it differed from the most frequent response, could make some participants defensive. It was the author's opinion that a person should not have to defend a position unless he felt strongly about it. Thus, the instructions to participants indicated that they were not to be concerned with the responses they made to the previous questionnaire. They were being given an indication of how others responded and, if the category they now selected differed from the most frequently selected category, they were to indicate, if possible, one or two important reasons for their choice. These questionnaires were sent to the same people who received the first questionnaire. From the returned questionnaires, the modal item responses were again calculated for each institution as from the first questionnaire. In addition, for each institution, reasons indicating a degree of importance different from the modal response were summarized. These reasons were not only summarized for each "is" and "should be" statement, but also by the categories "more important than most frequent response" and "less important than most frequent response." These modal responses and summaries of minority views were used in the fourth step of the Delphi technique (the third step for this project).

In the fourth step of the Delphi procedure, each participant should again receive the list of items, an updated summary of minority opinions, and a final chance to revise his opinions. This was the objective of the third questionnaire which was received by the participants at the beginning of May. The modal response was circled in red as in the second questionnaire. In addition, accompanying each questionnaire was a separate summary of minority opinions for the specific institution. These were prepared to line up readily with the appropriate goal statement. Only minority opinions cited by at least two people were included in this summary. After reading the goal statement the participant was to notice the most frequently checked category of importance (circled in red), and then read the reasons why some people thought the goal more important and why some thought it less important. After considering these reasons, he was to indicate his opinion by checking one of the categories of importance. For example, a participant was asked to read a goal statement such as "to help formulate programs in a number of public policy areas such as pollution control, urban renewal, and health care." He would notice that "of low importance" had been the most frequently chosen category to represent how important the goal presently is. He would also read that some participants had thought it should be rated of greater importance because "it was being done in some curricula, for example, environment and conservation curricula." Participants who had thought it should be rated of lesser importance than the most frequent response gave as one reason "very little was being done in this area." After noting the most frequently selected category and reading the minority views of both sides, the participant indicated his opinion by checking one of the categories.

The previous paragraphs describe how this study employed the procedures of the Delphi technique to help identify an institution's goals. An additional

step was included in the study which was not part of the Delphi technique. On the last questionnaire participants were asked to indicate on a high-low priority continuum those goal statements which they had indicated should be "of extremely high importance." The object of this step was to provide better discrimination among those goals which were of greatest preferred importance to the respondent. Other researchers (e.g., Gross and Grambsch) have found that the standard Likert scale does not always provide adequate discrimination in the most important category.

In order to provide participating institutions with their results, a report was prepared for each institution which included the following results:

1. The number of participants completing the questionnaires by group
2. A profile of the present and preferred importance given to each goal area
3. A comparison of their present and preferred profiles with those of the other participating institutions.
4. The mean and standard deviation of the present and preferred importance of each goal area and of each goal statement by response group and by all respondents for each questionnaire
5. A ranking of goal areas and goal statements according to their present and preferred importance by response group and by all respondents
6. A ranking of goal areas and goal statements according to the magnitude of discrepancy between present and preferred importance by response group and by all respondents
7. A plot indicating each group's mean importance rating by questionnaire for each goal area. These plots visually illustrate the

amount of convergence occurring among the groups for each goal area.

The same analyses were performed for all institutions combined.

The results were disseminated to each institution in the following way. The project director met with the liaison person on each campus to discuss the above results and provided him with a copy of the results to discuss with his president and others on his campus. After about two weeks, a team[4] composed of the project director, members of ETS and RELCV, and a consultant met with the president and other members of the institution for a half day to discuss the results.[5]

Results and Discussion

This section is divided into five areas: (1) Percent of Questionnaires Returned; (2) Reliability Estimates of Goal Areas; (3) Institution and Group Comparisons; (4) Evaluation of the Institutional Goals Inventory (IGI); and (5) Evaluation of the Delphi Technique.

Percent of Questionnaires Returned

The number of questionnaires originally sent and the number and percent returned by each participating group for all schools is given in Table 1. Identical information for each participating institution is given in Tables 2 through 6.

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[4]Members of the team were: Earl McGrath, consultant; Harry Blanton, James Dobbins, Ed Hobson, Oscar Mink, and Philip Winstead from RELCV; and Eldon Park, Richard Peterson, and Norman Uhl, from ETS.

[5]RELCV has developed a series of workshops to integrate the results of this study with their Administrative-Organizational Systems.

TABLE 1 ALL INSTITUTIONS

NUMBER OF QUESTIONNAIRES ORIGINALLY SENT AND THE NUMBER AND PERCENT RETURNED

Participant Group	Originally Sent	Returned Q1	Returned Q2	Returned Q3
Administrators	161	148 (92%)	135 (84%)	132 (82%)
Alumni	49	37 (76%)	27 (55%)	28 (57%)
Community	155	93 (60%)	73 (47%)	67 (43%)
Faculty	148	132 (89%)	120 (81%)	108 (73%)
Students	326	316 (97%)	308 (94%)	305 (94%)
Trustees	34	27 (79%)	22 (65%)	23 (68%)
Parents	103	83 (81%)	78 (76%)	69 (67%)
Advisory Council	13	8 (62%)	8 (62%)	9 (69%)
Total	989	844 (85%)	771 (78%)	741 (75%)

TABLE 2 INSTITUTION 1

NUMBER OF QUESTIONNAIRES ORIGINALLY SENT AND THE NUMBER AND PERCENT RETURNED

Participant Group	Originally Sent	Returned Q1	Q2	Q3
Administrators	31	29 (94%)	27 (87%)	27 (87%)
Alumni	11	10 (91%)	8 (73%)	8 (73%)
Community	46	29 (63%)	23 (50%)	21 (46%)
Faculty	27	25 (93%)	24 (89%)	22 (81%)
Students	57	55 (96%)	55 (96%)	56 (98%)
Trustees	12	10 (83%)	8 (67%)	10 (83%)
Parents	55	45 (82%)	40 (73%)	32 (58%)
Advisory Council	13	8 (62%)	8 (62%)	9 (69%)
Total	252	211 (84%)	193 (77%)	185 (73%)

TABLE 3 INSTITUTION 2

NUMBER OF QUESTIONNAIRES ORIGINALLY SENT AND THE NUMBER AND PERCENT RETURNED

Participant Group	Originally Sent	Returned Q1	Q2	Q3
Administrators	23	19 (83%)	20 (87%)	18 (78%)
Alumni	6	4 (67%)	2 (33%)	3 (50%)
Community	40	20 (50%)	17 (43%)	17 (43%)
Faculty	25	21 (84%)	19 (76%)	18 (72%)
Students	54	51 (94%)	50 (93%)	51 (94%)
Trustees	5	5 (100%)	4 (80%)	4 (80%)
Total	153	120 (78%)	112 (73%)	111 (73%)

TABLE 4 INSTITUTION 3

NUMBER OF QUESTIONNAIRES ORIGINALLY SENT AND THE NUMBER AND PERCENT RETURNED

Participant Group	Originally Sent	Returned Q1	Returned Q2	Returned Q3
Administrators	28	25 (89%)	17 (61%)	17 (61%)
Alumni	14	11 (79%)	8 (57%)	7 (50%)
Community	39	27 (69%)	20 (51%)	17 (44%)
Faculty	26	21 (81%)	19 (73%)	17 (65%)
Students	55	52 (95%)	48 (87%)	49 (89%)
Trustees	6	4 (67%)	4 (67%)	3 (50%)
Total	168	140 (83%)	116 (69%)	110 (65%)

TABLE 5 INSTITUTION 4

NUMBER OF QUESTIONNAIRES ORIGINALLY SENT AND THE NUMBER AND PERCENT RETURNED

Participant Group	Originally Sent	Returned Q1	Returned Q2	Returned Q3
Administrators	42	40 (95%)	40 (95%)	38 (90%)
Alumni	9	6 (67%)	5 (56%)	5 (56%)
Community	14	5 (36%)	4 (29%)	3 (21%)
Faculty	45	43 (96%)	38 (84%)	35 (78%)
Students	106	104 (98%)	104 (98%)	98 (92%)
Trustees	6	3 (50%)	1 (17%)	2 (33%)
Total	222	201 (91%)	192 (86%)	181 (82%)

TABLE 6 INSTITUTION 5

NUMBER OF QUESTIONNAIRES ORIGINALLY SENT AND THE NUMBER AND PERCENT RETURNED

Participant Group	Originally Sent	Returned Q1	Q2	Q3
Administrators	37	35 (95%)	31 (84%)	32 (86%)
Alumni	9	6 (67%)	4 (44%)	5 (56%)
Community	16	12 (75%)	9 (56%)	9 (56%)
Faculty	25	22 (88%)	20 (80%)	16 (64%)
Students	54	54 (100%)	51 (94%)	51 (94%)
Trustees	5	5 (100%)	5 (100%)	4 (80%)
Parents	48	38 (79%)	38 (79%)	37 (77%)
Total	194	172 (89%)	158 (81%)	154 (79%)

The percent of questionnaires returned is very high for this type of study; of the 989 people receiving them, 844 or 85% answered and returned the first, 771 or 78% answered and returned the second, and 741 or 75% answered and returned the third questionnaire. Other studies of goals have not achieved this high percent of returns. For example, the Gross and Grambsch (1968) study, which is the most significant effort thus far to examine university goals as seen by faculty and administrators in 68 different universities, achieved (with follow-up) a 51% return from faculty and a 40% return from administrators of their single questionnaire. In a recent study (Cyphert and Gant, 1971) of the goals of the School of Education at the University of Virginia by the use of the Delphi technique, 68% of the sample of 421 people returned the first questionnaire, while 62% returned the second; the exact percentage returning the remaining questionnaires is not clear from the data presented.

Tables 2 through 6 indicate that the total percentages varied with the institution, giving a range from 78 to 91%, 69 to 86%, and 65 to 82% on the first, second, and third questionnaires, respectively. Regardless of institution, the group with the poorest percentage of returned questionnaires was the community, while the group with the best was the students. This was not unexpected since the community is probably the group having the smallest personal commitment to the institution and the students received a $10 honorarium after completion of the third questionnaire! One group (parents of the students who were participating in the study) was included only at Institutions 1 and 5. Another group (advisory council) was included only at Institution 1. Notice that there is a wide range in the number of participants selected from each group. (The reasons for this have been discussed in the Method section.) In drawing conclusions about the goals of

a single institution, it would be desirable to have a larger sample from that institution. Since this was not the main purpose of this study, the additional cost could not be justified. However, additional data collected in a substudy at Institution 4, for a different purpose, permits an evaluation of the sampling of faculty and students employed in this study.

> In this separate study, the first questionnaire was sent to a randomly selected group of 400 faculty and 275 undergraduate and 275 graduate students who were not included in this study. This institution, a large state university with a number of academic schools, provided the most complex organization of the five institutions and therefore also provided a rigorous check on the sampling procedure employed in the present study. The results obtained from this separate study, which used a large sample of faculty and students, were very similar to the results from the present study which employed a much smaller sample of faculty and students. It was found that in comparing faculty and student results separately, not only were the goal areas ranked identically, but it was an unusual case when the means of goal areas differed by more than 0.1.

Thus, at Institution 4, the stratified random sampling of faculty and students employed in the present study gave representative results. However, a disadvantage of using very small groups (e.g., alumni) is that an individual who changes in a small group will have a larger effect on his group mean than if he were in a group with more respondents. For this reason, it would be expected that the mean for the larger groups would be more stable than the mean for the smaller groups.

Another question related to the sample is whether, on the first questionnaire, those participants who completed only the first questionnaire differed in their responses from those who completed more than one questionnaire. This question was investigated by comparing the above two groups, using the individual's mean value for the goal area as the dependent variable, and testing for differences between the two groups using the Mann-Whitney U Test. In selecting groups for this analysis, attention was given to (1) not

combining groups and/or institutions which might mask differences; (2) having each participant group represented; (3) having each institution represented; and (4) having a reasonable number of dropouts within each group. Those groups selected were: community, faculty, and parents at school 1; community at school 2; administrators, alumni, community, and faculty at school 3; and faculty and students at schools 4 and 5. Rather than test each of these twelve groups for every goal area for both present and preferred importance, three goal areas were randomly assigned to each group. None of these 36 analyses rejected the null hypothesis at the .05 level of significance, lending no support to the hypothesis that those participants who completed only questionnaire 1 responded differently to questionnaire 1 than those also completing questionnaire 2 and/or 3.

Reliability Estimates of Goal Areas

In addition to understanding the sample used in the study, it is also important for interpreting the results to have an estimate of the reliability of the measuring instrument. Table 7 presents the reliability estimates for both present and preferred ratings of each goal area for each questionnaire. Coefficient alpha (Cronbach, 1951), a generalization of the Kuder-Richardson formula 20, was employed as the measure of internal consistency.

Two goal areas, Innovation and Financial Soundness, have poor reliability estimates. In investigating the three goal statements composing the goal area of Innovation, it was found that statement 83, "To protect valuable traditions against unwarranted change," had a much larger standard deviation than either of the other statements, except in the two instances when the reliabilities were .52 (present importance ratings on questionnaires 2 and 3). In these latter two situations, the standard deviation of item 83 was similar in magnitude to the others. Since this statement was the only goal statement

TABLE 7

RELIABILITY ESTIMATES OF GOAL AREAS BY QUESTIONNAIRE

Goal Area	# of Items	Present Importance Q1	Q2	Q3	Preferred Importance Q1	Q2	Q3
1. Financial Soundness	3	.58	.35	.36	.58	.43	.59
2. Non-Academic	6	.68	.57	.57	.78	.78	.81
3. Intellectual Development of the Student	7	.81	.74	.78	.63	.71	.74
4. Personal Development of the Student	8	.89	.85	.85	.77	.70	.75
5. Vocational Preparation	6	.77	.53	.58	.73	.69	.76
6. Religious Orientation	6	.93	.96	.97	.93	.93	.95
7. Training of Graduate and Professional Students	5	.75	.65	.65	.72	.64	.73
8. Research	6	.80	.82	.82	.76	.68	.75
9. Local and Regional Service	8	.77	.40	.53	.80	.80	.83
10. National and International Service	7	.81	.85	.84	.84	.83	.85
11. Social Criticism	6	.73	.64	.63	.67	.62	.69
12. Freedom	8	.78	.67	.65	.81	.80	.81
13. Innovation	3	.09	.52	.52	.02	.27	.31
14. Governance	4	.75	.78	.76	.71	.69	.73
15. Self-Study and Planning	5	.80	.77	.77	.65	.57	.66
16. Egalitarianism	5	.53	.54	.46	.65	.49	.77
17. Esprit and Quality of Life	6	.77	.79	.78	.61	.47	.50
18. Concern for Projecting Good Image	4	.59	.65	.63	.71	.75	.77

in the instrument that was keyed in a negative direction, it is hypothesized that some people interpreted it as being positive, similar to all the other statements, while others interpreted it correctly, which would result in larger standard deviations.

Of the 96 reliability estimates from the remaining 16 goal areas, 92 are above .50, 82 are above .60, 61 are above .70, and 27 are above .80. With the exception of Innovation and Financial Soundness, this data provides support for the internal consistency of the goal areas. These reliabilities are as high or higher than would ordinarily be expected from scales composed of 3 to 8 items, especially since they were constructed on a priori bases. Furthermore, since the instrument's purpose is to compare groups and not individuals, the goal areas (with the two exceptions) appear sufficiently reliable for institutional studies.

As Davis (1965, p. 24) states: "For measuring the average characteristics of groups of the size of many classes, say twenty-five to fifty, scores with reliability coefficients as low as .50 may often be highly serviceable. With average scores in larger groups, even lower reliability coefficients are frequently useful."

Now that the sample has been described and the internal consistency of the goal areas demonstrated, some results will be presented.

Institution and Group Comparisons

While the detailed results obtained at each institution were the subject of separate reports to each institution (Uhl and Hopkins, 1970a, 1970b, 1970c, 1970d, 1970e) and will not be presented in this report, certain general results are included here. Figure 1 presents the mean responses of all respondents in Institution 1 to the third questionnaire for each goal area. Figures 2 through 5 present the information for Institutions 2 through 5, respectively.

FIGURE 2. PROFILE OF INSTITUTION 2 COMPARING MEAN RESPONSES TO PRESENT AND PREFERRED IMPORTANCE OF GOAL AREAS FROM THIRD QUESTIONNAIRE

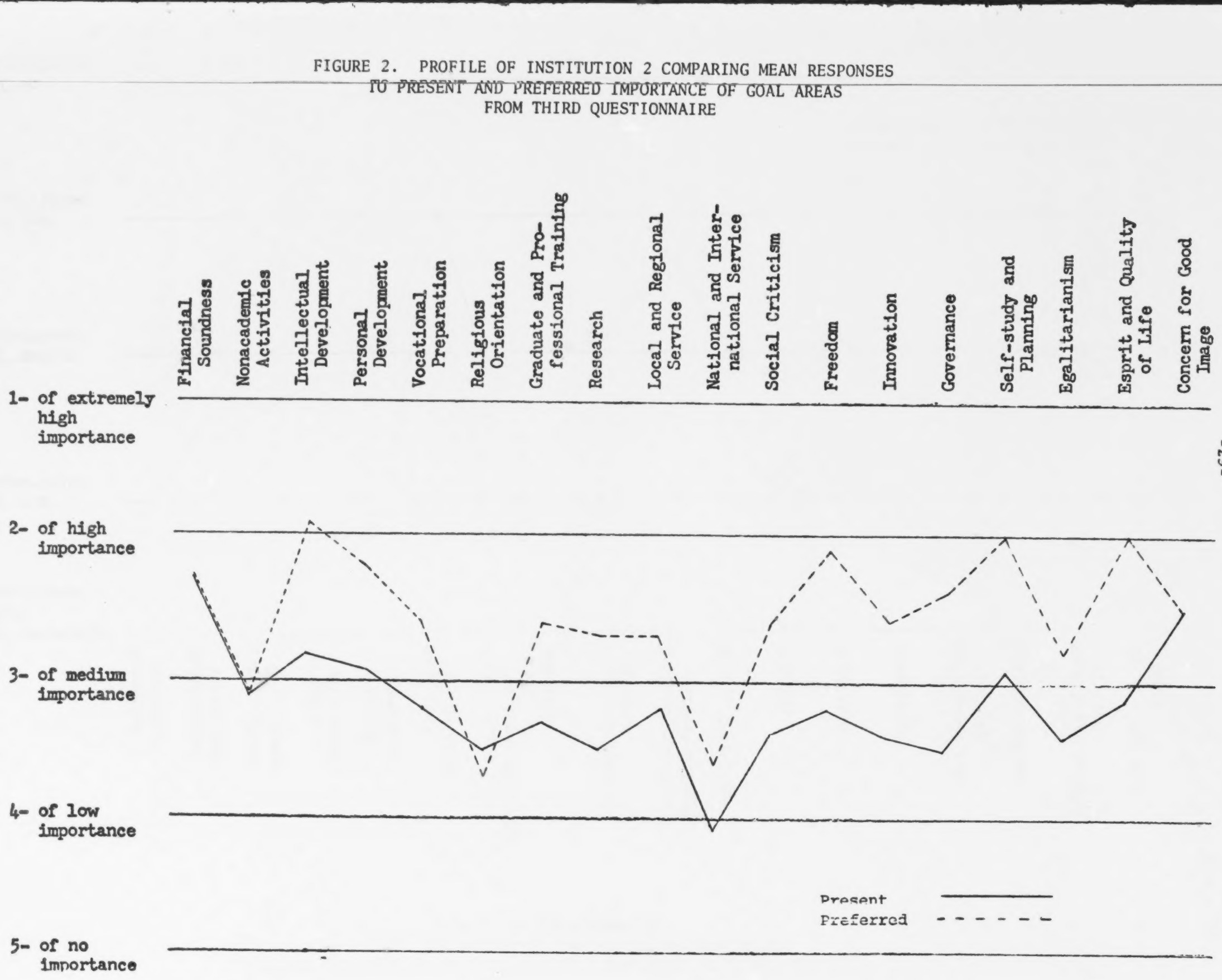


FIGURE 3. PROFILE OF INSTITUTION 3 COMPARING MEAN RESPONSES TO PRESENT AND PREFERRED IMPORTANCE OF GOAL AREAS FROM THIRD QUESTIONNAIRE

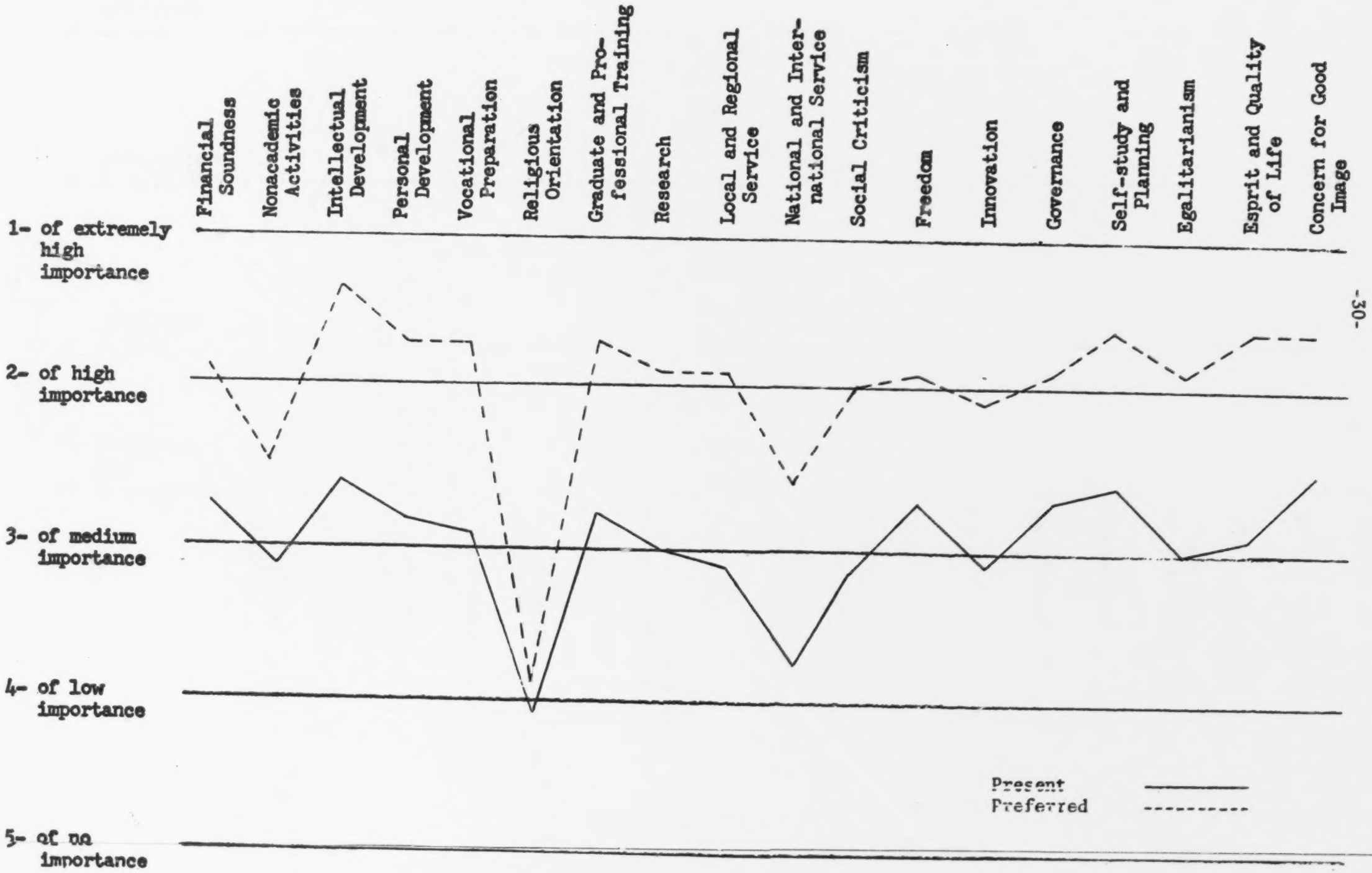


FIGURE 4. PROFILE OF INSTITUTION 4 COMPARING MEAN RESPONSES TO PRESENT AND PREFERRED IMPORTANCE OF GOAL AREAS FROM THIRD QUESTIONNAIRE

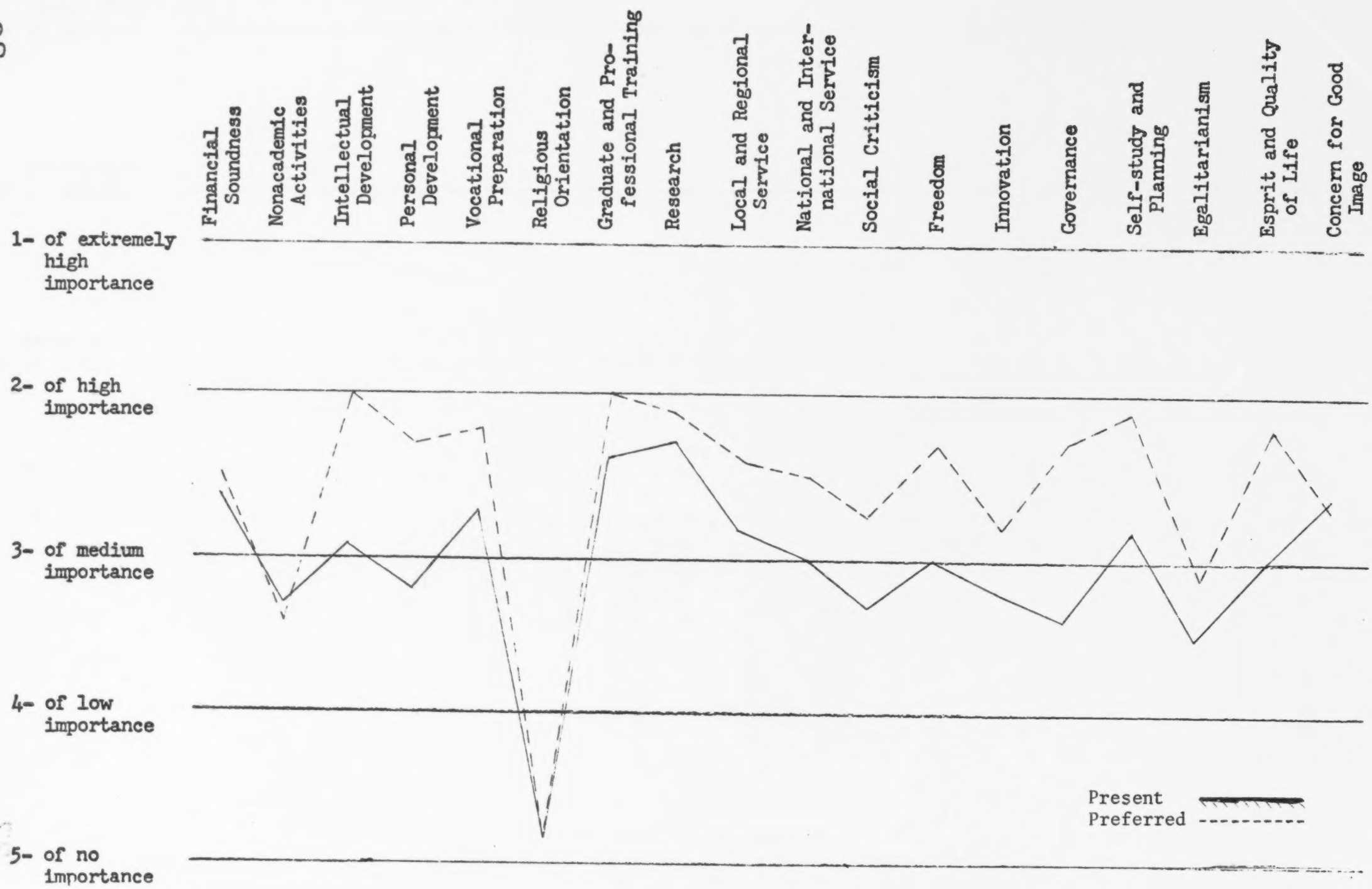
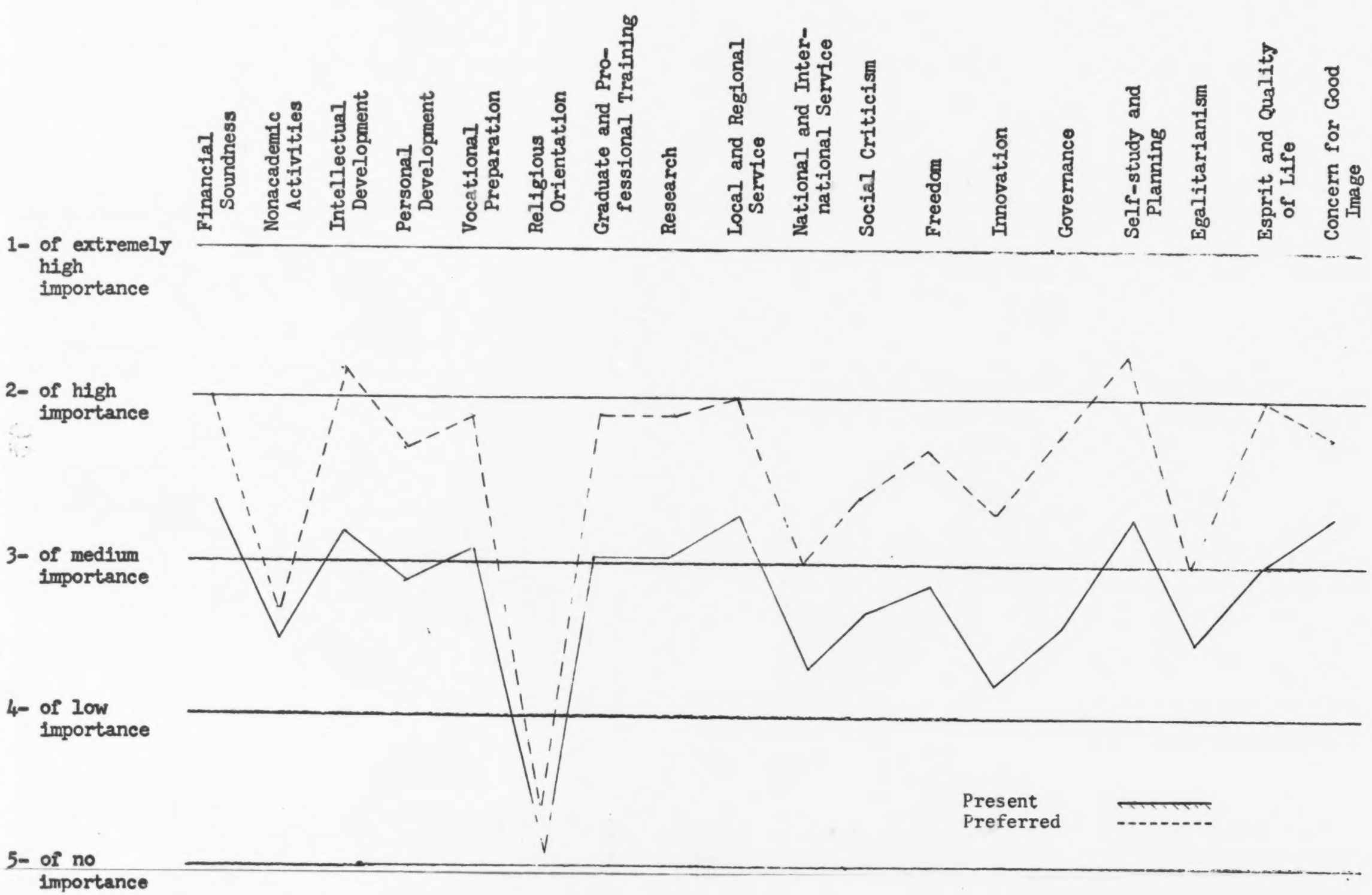


FIGURE 5. PROFILE OF INSTITUTION 5 COMPARING MEAN RESPONSES TO PRESENT AND PREFERRED IMPORTANCE OF GOAL AREAS FROM THIRD QUESTIONNAIRE



The solid line in each of the figures indicates the participants' perceptions of the importance presently being given to each goal area. The line of dashes indicates the participants' beliefs of the degree of importance that ought to be given to each goal area. The difference between the solid and dashed lines could be viewed as an indication of the degree of satisfaction with the present importance given to each goal area. These profiles can provide valuable information to an institution by identifying those goal areas that are high in preferred importance and also have a large discrepancy between the present and preferred importance, thus having the potential of causing dissatisfaction, tension, and even conflict. For example, in Figure 3 the goal areas of Intellectual Development and Self-Study and Planning would be among those selected for possible improvement by Institution 3. By examining the ratings of each of the goal statements which compose these two goal areas, a better understanding of the nature of the improvement may be obtained. While the profiles of the institutions are different, two areas that might be selected for improvement at all five institutions are Intellectual Development and Self-Study and Planning. At each institution these two areas are rated high in preferred importance and also indicate a relatively large discrepancy between the present and preferred importance.

Due to the convergence among the groups at each institution in their responses to the third questionnaire, the institutional profiles presented in Figures 1 through 5, although based on the total group, are very similar to individual group profiles.

To illustrate this degree of similarity among the group ratings on the third questionnaire, the goal areas were ranked separately for each group with regard to the mean importance attached to the goal area by that group.

By calculating the degree of relationship between the rankings of two groups (such as faculty and students), it is possible to identify those groups whose rankings are very similar and those whose rankings are different. Spearman's rank-order rho was the statistic used to examine the relationship. The preferred importance ratings will be discussed first. It was found that in Institutions 1 and 5 no rho was below .80 and almost all were above .85. This indicates that the rankings of goals in terms of their relative importance were almost identical for the different groups at these two institutions. (A rho of 1.00 would indicate perfect agreement with respect to the order of importance and a rho of -1.00 would indicate perfect disagreement.) There was also high agreement at the other three institutions. The rhos calculated for Institutions 2 and 3 were all above .85, except for trustees whose values of rho ranged from .63 to .77 at Institution 2 and from .72 to .79 at Institution 3. At Institution 4, with the exception of alumni, four of whose values ranged from .76 to .83, all rhos were above .83. One possible reason for the lower relationships obtained between trustees and other groups in Institutions 2 and 3 and alumni and other groups in Institution 4 is the small number in these groups who responded to the third questionnaire. Another possible interpretation is that there is less agreement among these groups and other groups at their institution than between any of the other groups. There is some support for this latter interpretation at Institution 2. At this institution on the first questionnaire, trustees ranked the goal areas in a manner similar to alumni (rho = .81) and community (rho = .77) but quite different from students (rho = .31), faculty (rho = .52), and administration (rho = .57). In fact, the results of the first questionnaire at this institution as well as the other private institution (Institution 1) indicated the clustering of two groups - the on-campus

groups (students, faculty, administrators) and the off-campus groups (trustees, alumni, community). However, on questionnaire 3 the groups at Institution 1 converged and came to some agreement. This also happened at Institution 2 although the trustee group did not converge as much as the other off-campus groups. The result was that the trustee group became more similar to on-campus groups (with students, rho = .63; with faculty, rho = .65; and with administrators, rho = .69) but not to the same extent that the community and alumni did. (On the third questionnaire all values of rho between community and on-campus groups were above .93 while those between alumni and on-campus groups were .92 [administrators], .89 [faculty], and .81 [students]).

In general, the degree of agreement on the third questionnaire between groups at each institution was even better when the present importance of the goal areas was being rated. This will be discussed further in the section concerned with measuring convergence.

Gross and Grambsch (1968) report the similarity between the values of faculty and administrators in universities. This study found similar results. The results of the first questionnaire would be the appropriate results to compare with Gross and Grambsch's study. The results of this questionnaire indicate that in all five institutions the preferred goals of the administrators were closest to those of the faculty (rho varied from .86 to .98). The same conclusions would be drawn from the data obtained from the third questionnaire. It was also found, as in the Danforth Foundation study (1969) with liberal arts colleges, that the preferred goals of students and faculty were very similar. (From the results of the first questionnaire, these values of rho varied between .87 and .93).

Evaluation of the Institutional Goals Inventory (IGI)

The reliability of the preliminary form of the IGI used in this study

has already been presented. It was found that two areas, Innovation and Financial Soundness, had low reliabilities. All other areas were found to possess adequate internal consistency. The good reliability of these goal areas, which were composed of 3 to 8 statements, is an indication that the items were relatively free of double meanings.

Another indication of support for the IGI was that although space was provided, very few goal statements were modified or additional goal statements added. Those few which were added did not identify any weak goal areas or goal statements.

The unusually high percentage of participants completing all three questionnaires supports the face validity of the instrument. It is highly unlikely that such good returns would have been possible if the participants did not view the instrument as adequately measuring their goal perceptions and values.

During the discussion of results with the institutions, several questions were asked regarding the instrument. Questions were raised as to why the Innovation area was not rated of higher preferred importance. The low estimates of reliability for this goal area provide an answer to this question. Discussions concerning the Religious Orientation area at one of the church-related schools revealed that some individuals who felt religious orientation was or should be an important goal rated some of the goal statements in this goal area as very low in importance. Thus, it may be necessary to rework a few of the goal statements in this goal area.

Independent of the results of this study, five specialists in higher education who had some familiarity with the institutions participating in this study, were asked to select the institutions that they thought would attach the greatest and the least present importance to each goal area. For

example, in the Religious Orientation area, one of the church-affiliated institutions would probably be selected as giving greater importance to this goal area than any of the other institutions, while one of the public institutions would probably be selected as giving the least importance to this goal area.

Since the five institutions were selected because of their differences (Appendix D describes each institution), the raters could easily select the low and high institution for many, but not all goal areas. On some goal areas the raters could not agree. Table 8 illustrates the schools selected as presently representing the extremes in each goal area. If three of the five raters selected the same institution as being highest or lowest for a goal area, that institution was chosen to represent high or low importance in that goal area. If two schools were each selected by two raters, both were included (e.g., see Table 8, Financial Soundness, high importance). However, if one school was selected by two raters and the other raters each selected a different school or if all raters selected different schools, no decision was made regarding that selection (e.g., see Table 8, Innovation, Governance, Social Criticism - low importance, etc.).

Support for the validity of the IGI goal areas would be demonstrated if, using the data obtained from each institution, the independent selections of the raters could be verified.

Table 8 also reports the means and standard deviations of the present importance ratings for each school by goal area, obtained from the first and third questionnaires. In addition, those institutions are identified which should exhibit the most extreme differences in each goal area, according to the independent raters. The last column indicates whether

TABLE 8

MEANS AND STANDARD DEVIATIONS
OF PRESENT IMPORTANCE OF EACH GOAL AREA FOR EACH
INSTITUTION AND RESULTS OF INDEPENDENT RATINGS FOR EACH GOAL AREA*

Goal Area	Institutions Selected by Independent Raters: High Importance	Low Importance	Means and Standard Deviations for Each Institution on Questionnaires 1 (Q1) and 3 (Q3):	1 M	1 S	2 M	2 S	3 M	3 S	4 M	4 S	5 M	5 S	F value
Financial Soundness	1,2	4	Q1	2.1	.59	2.1	.61	2.5	.65	2.6	.61	2.4	.67	8.43
			Q3	2.3	.26	2.3	.23	2.7	.34	2.6	.22	2,6	.28	11.87
Non-academic	1,2	4	Q1	2.9	.53	2.9	.52	3.1	.55	3.2	.52	3.5	.50	5.78
			Q3	3.1	.18	3.1	.22	3.1	.30	3.3	.24	3.5	.22	9.01
Intellectual Development	1	4	Q1	2.3	.52	2.7	.52	2.6	.61	2.8	.55	2.8	.52	9.46
			Q3	2.3	.26	2.8	.29	2.6	.40	2.9	.27	2.8	.24	21.60
Personal Development	1	4	Q1	2.4	.56	2.8	.57	2.7	.63	3.1	.52	3.0	.55	13.10
			Q3	2.4	.27	2.9	.21	2.8	.33	3.2	.20	3.1	.27	32.07
Vocational Preparation	4	1	Q1	3.0	.59	3.0	.54	2.7	.64	2.6	.54	2.8	.56	7.15
			Q3	3.1	.21	3.2	.24	2.8	.32	2.7	.23	2.9	.26	17.33
Religious Orientation	1	4,5	Q1	2.9	.76	3.4	.75	4.0	.64	4.4	.53	4.4	.54	23.07
			Q3	3.0	.35	3.5	.39	4.1	.47	4.9	.22	4.9	.22	61.85
Train. Grad. and Prof.	4	2	Q1	2.9	.67	3.1	.62	2.7	.69	2.2	.51	2.9	.60	10.92
			Q3	2.9	.26	3.2	.31	2.8	.34	2.3	.22	3.0	.21	28.85
Research	4	2	Q1	2.9	.62	3.3	.62	2.9	.64	2.3	.53	3.0	.56	15.28
			Q3	3.1	.19	3.5	.23	3.0	.29	2.3	.26	3.0	.24	39.84
Local and Reg. Service	4,5	2	Q1	2.9	.56	3.1	.52	3.0	.68	2.8	.54	2.7	.52	4.87
			Q3	3.0	.19	3.2	.17	3.1	.31	2.8	.24	2.7	.22	14.87
National and Intl. Service	4	2	Q1	3.6	.65	3.8	.57	3.4	.71	2.8	.60	3.5	.62	14.67
			Q3	3.8	.20	4.1	.17	3.8	.34	3.0	.20	3.7	.23	48.08
Social Criticism	3	-	Q1	3.0	.55	3.3	.54	3.0	.62	3.4	.52	3.3	.53	
			Q3	3.1	.19	3.4	.23	3.1	.28	3.3	.21	3.3	.20	
Freedom	3	2	Q1	2.8	.55	3.2	.63	2.8	.61	3.0	.56	3.0	.53	4.24
			Q3	2.8	.24	3.2	.34	2.7	.31	3.0	.26	3.1	.20	9.77
Innovation	-	-	Q1	3.2	.91	3.5	.79	3.3	.78	3.3	.67	3.3	.85	
			Q3	3.0	.24	3.4	.28	3.1	.32	3.2	.28	3.8	.27	
Governance	-	-	Q1	2.9	.63	3.2	.79	2.8	.73	3.3	.63	3.2	.66	
			Q3	2.9	.32	3.5	.44	2.7	.33	3.4	.32	3.4	.33	
Self-Study and Planning	-	-	Q1	2.4	.68	2.8	.71	2.6	.73	2.8	.63	2.7	.66	
			Q3	2.3	.35	2.9	.31	2.6	.32	2.8	.25	2.7	.29	
Egalitarian-ism	3	1	Q1	3.3	.57	3.3	.58	2.9	.62	3.4	.57	3.3	.56	6.20
			Q3	3.3	.19	3.4	.22	3.0	.31	3.5	.24	3.5	.20	10.30
Esprit and Qual. of Life	1	-	Q1	2.5	.56	3.0	.67	2.8	.65	3.0	.58	3.0	.64	
			Q3	2.5	.25	3.1	.31	2.9	.35	3.0	.27	3.0	.24	
Concern for Good Image	1	-	Q1	2.1	.57	2.5	.57	2.6	.63	2.6	.58	2.8	.58	
			Q3	2.0	.26	2.5	.27	2.5	.30	2.6	.29	2.7	.28	

*The lower the mean, the higher the importance.

there is a significant difference between the means of the two institutions selected by the raters. (The means and standard deviations from the third questionnaire will be discussed in another section.) If these means are not only significantly different, but are also, for that goal area, the lowest and highest means of the five institutions, support for the validity of that IGI goal area is demonstrated. In certain areas (Innovation, Governance, Self-Study and Planning) there was no agreement among raters and therefore they could not be validated. In three other goal areas (Social Criticism, Esprit and Quality of Life, and Concern for Good Image) agreement was obtained only at the most important end of the scale, so only partial validation was possible.

Of the twelve goal areas containing complete information, ten were validated. The Non-academic goal area and Egalitarianism were validated for the institution of highest importance, but not for the one of lowest importance. In both of these cases, the institutions selected as attaching the least importance have the means which ranked them next to lowest, rather than lowest, in importance. Validation was achieved in all three cases where only the institution rated as attaching highest importance could be tested.

Summarizing, of the 18 goal areas, three could not be tested; another three could be partially validated, and were; of the remaining twelve, ten were completely validated, and the other two achieved partial validation. Thus, with the exception of the three goal areas that could not be validated, strong support for the validity of the goal areas was achieved.

Appendix F reports the intercorrelations among the goal areas based upon the five institutions' ratings of both present and preferred importance on questionnaire 3. These correlations have a similar pattern to, but are

slightly larger in magnitude than those on questionnaires 1 and 2. While the correlations obtained for the individual institutions are smaller in magnitude due to the more homogeneous sample, the correlations based upon all institutions illustrate that some of the goal areas have considerable overlap. This result is not surprising; for example, it would be expected that the goal area of Graduate-Professional Training would be highly related to the goal area of Research. The magnitudes of the correlation coefficients for present importance (r=.83) and preferred importance (r=.77) support this. Other goal areas rated in terms of present importance and having at least a 50% overlap (correlations above .707) on questionnaire 3 were: Graduate-Professional Training and National-International Service (r=.85), National-International Service and Research (r=.77), Personal Development and Intellectual Development (r=.75), and Personal Development and Religious Orientation (r=.73). On the ratings of preferred importance, the only goal areas to have at least a 50% overlap were the previously mentioned Graduate-Professional Training and Research, and Graduate-Professional Training and National-International Service (r=.71). Thus, a few of these goal areas are highly related. A factor analysis of individual items is planned and will assist in the further development of the instrument.

Also reported in Appendix F are the correlations between the present and preferred ratings of importance on questionnaire 3 for each goal area. The correlations range from -.04 for the goal area Innovation to .79 for the goal area Religious Orientation. The median correlation is .32. Religious Orientation was the only goal area in which there was greater than 50% overlap between ratings of present and preferred importance. Thus, as one would expect, these two methods of rating goal statements result in different information.

there is a significant difference between the means of the two institutions selected by the raters. (The means and standard deviations from the third questionnaire will be discussed in another section.) If these means are not only significantly different, but are also, for that goal area, the lowest and highest means of the five institutions, support for the validity of that IGI goal area is demonstrated. In certain areas (Innovation, Governance, Self-Study and Planning) there was no agreement among raters and therefore they could not be validated. In three other goal areas (Social Criticism, Esprit and Quality of Life, and Concern for Good Image) agreement was obtained only at the most important end of the scale, so only partial validation was possible.

Of the twelve goal areas containing complete information, ten were validated. The Non-academic goal area and Egalitarianism were validated for the institution of highest importance, but not for the one of lowest importance. In both of these cases, the institutions selected as attaching the least importance have the means which ranked them next to lowest, rather than lowest, in importance. Validation was achieved in all three cases where only the institution rated as attaching highest importance could be tested.

Summarizing, of the 18 goal areas, three could not be tested; another three could be partially validated, and were; of the remaining twelve, ten were completely validated, and the other two achieved partial validation. Thus, with the exception of the three goal areas that could not be validated, strong support for the validity of the goal areas was achieved.

Appendix F reports the intercorrelations among the goal areas based upon the five institutions' ratings of both present and preferred importance on questionnaire 3. These correlations have a similar pattern to, but are

Evaluation of the Delphi Technique

This section considers one of the prime purposes for performing the study, i.e., evaluating whether the Delphi technique produces convergence of opinion with regard to an institution's goals among the participants in this study. Also included in this section is a discussion of the types of judgments involved and the accuracy of the technique, since convergence would not be very helpful if it led to a less accurate answer.

Investigation of convergence. One procedure for determining the occurrence of convergence of opinion is to calculate for each questionnaire the absolute sum of the distances between each participant's response and the mean of all the participants' responses, and to examine whether the value of this absolute sum decreases from questionnaire to questionnaire. A repeated measures design using multivariate analysis of variance was employed to investigate the significance of these decreases. Separate analyses were performed for the rating of present and preferred importance for each goal area. In addition to including the time of administration of the questionnaire as an independent variable, school and group were also included in order to evaluate whether school or group interacts with time of administration. Thus, the degree of convergence among individual participants will be tested. Later in this section the degree of convergence among groups will be discussed.

A multivariate rather than a univariate model was chosen because two assumptions of the latter model were untenable. The standard deviations given in Table 8 for the first and third questionnaires demonstrate that the assumption of homogeneous variances for the data obtained from the three questionnaires is not justified. While Box (1954) and Greenhouse and Geisser (1959) have developed approximate solutions, an exact model which does not

restrict these variances is more desirable. The second assumption which is unlikely to be characteristic of the data is that the correlation of ratings between questionnaires 1 and 2 will be equal to the correlations between questionnaires 1 and 3 and 2 and 3. For these reasons, a repeated measures design using a multivariate analysis of variance model (MANOVA) was used. By employing appropriate transformations of the data before entering the MANOVA program, it was possible to separate those aspects of the model due to the sampling of subjects from those residing in the outcome variables. Finn (1969) describes this procedure.

The results of these analyses by goal areas are presented in Tables 9 (present importance) and 10 (preferred importance). The significant Q effect ($p < .001$) for every goal area in both tables indicates that convergence of opinion occurred.

The degree of convergence obtained in any goal area varies for different schools. For example, Institution 3, while obtaining very good convergence in a few areas, in general obtained less convergence than the other schools. In any given goal area some schools will obtain more convergence than will others. This explains the significant interaction between school and questionnaire present in almost all goal areas and is illustrated in Figure 6 (present importance) and 7 (preferred importance). These two figures indicate by school for each goal area the variability and the degree of convergence from the first to the third questionnaire. The black portion indicates the distance from one standard deviation above the mean on the third questionnaire to one standard deviation below the mean on the third questionnaire. The screened area which appears gray illustrates the distance that a standard deviation on the first questionnaire exceeded that of the standard deviation of the third questionnaire. Thus this area is an indication of the convergence of opinion from the first to the third questionnaire

TABLE 9

SUMMARY OF SIGNIFICANT RESULTS ($p < .01$) FROM MANOVA
USING REPEATED MEASURES DESIGN BY GOAL AREAS
FOR PRESENT IMPORTANCE RATINGS[a]

Sources of Variance	Goal Areas: Fin. So.	Non Acad	Int. Dev.	Per. Dev.	Voc. Prep	Rel. Or.	Grad. Prof.	Res.	Loc. Reg.	Nat. Intl.	Soc. Crit.	Free	Inn-ova.	Gov.	Self Study	Egal.	Espr. Qual.	Image
Between Subjects																		
School (S)	**	**	*	**	**	**	**		**	**	**	**	**	**	**	**	**	**
Group (G)					*	*							*					
S x G																		
Within Subjects																		
Questionnaire (Q)	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
S x Q	**	**		**	**	**	**	**	**	**		**	**	**	**	*	*	**
G x Q													*					
S x G x Q																		

[a] * = $p < .01$
** = $p < .001$

No asterisk = $p > .01$

TABLE 10

SUMMARY OF SIGNIFICANT RESULTS ($p < .01$) FROM MANOVA
USING REPEATED MEASURES DESIGN BY GOAL AREAS
FOR PREFERRED IMPORTANCE RATINGS[a]

Sources of Variance	Goal Areas: Fin. So.	Non-Acad.	Int. Dev.	Per. Dev.	Voc. Prep.	Rel. Or.	Grad. Prof.	Res.	Loc. Reg.	Nat. Intl.	Soc. Crit.	Free-dom	Inn-ova.	Gov.	Self Study	Egal.	Espr. Qual.	Image
Between Subjects																		
School (S)	**		**	**	**	**	**	**	*	**	**	**	**	**	*	**	**	**
Group (G)						*												
S x G																		
Within Subjects																		
Questionnaire (Q)	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
S x Q	**		**	**	**	**		*	**	**			**	**	**	*	**	*
G x Q																		
S x G x Q						*												

[a] * = $p < .01$

** = $p < .001$

No asterisk = $p > .01$

FIGURE 6. Variability (Plus and Minus one Standard Deviation) of the Ratings of Importance on Questionnaires 1 and 3. For Each Institution and Each Goal Area – PRESENT Importance

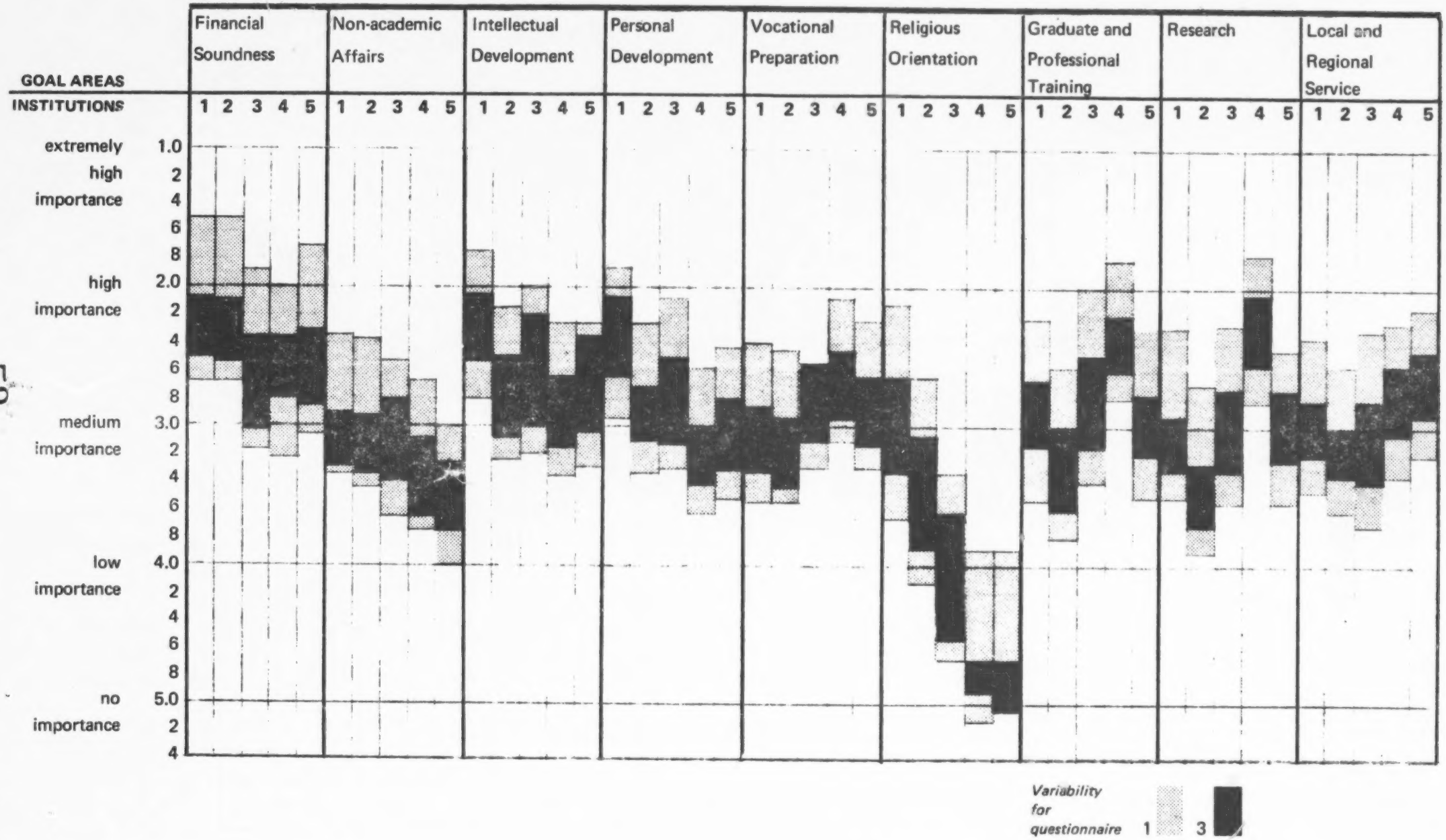


FIGURE 6. (continued)

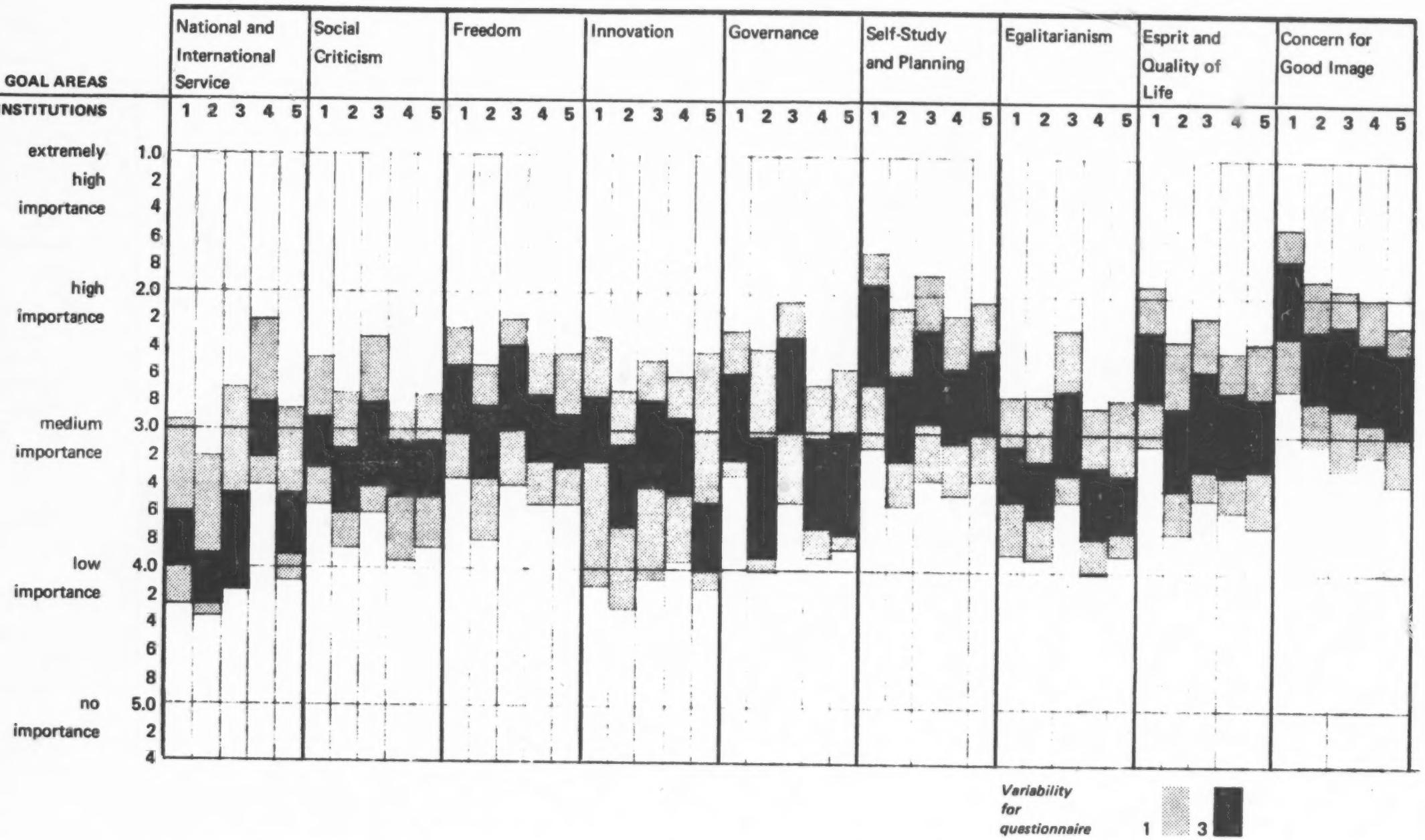


FIGURE 7. Variability (Plus and Minus one Standard Deviation) of the Ratings of Importance on Questionnaires 1 and 3 For Each Institution and Each Goal Area –PREFERRED Importance

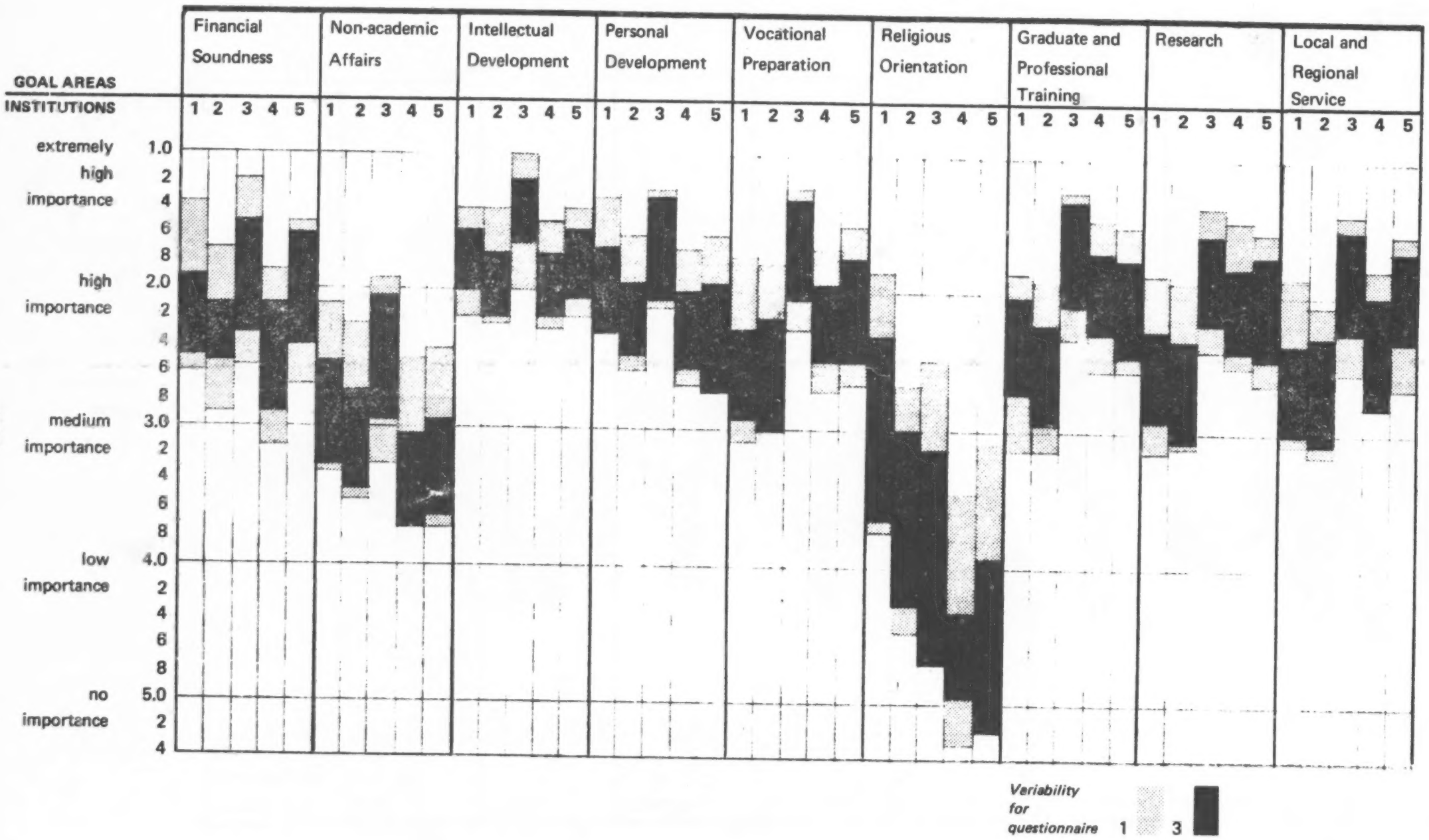
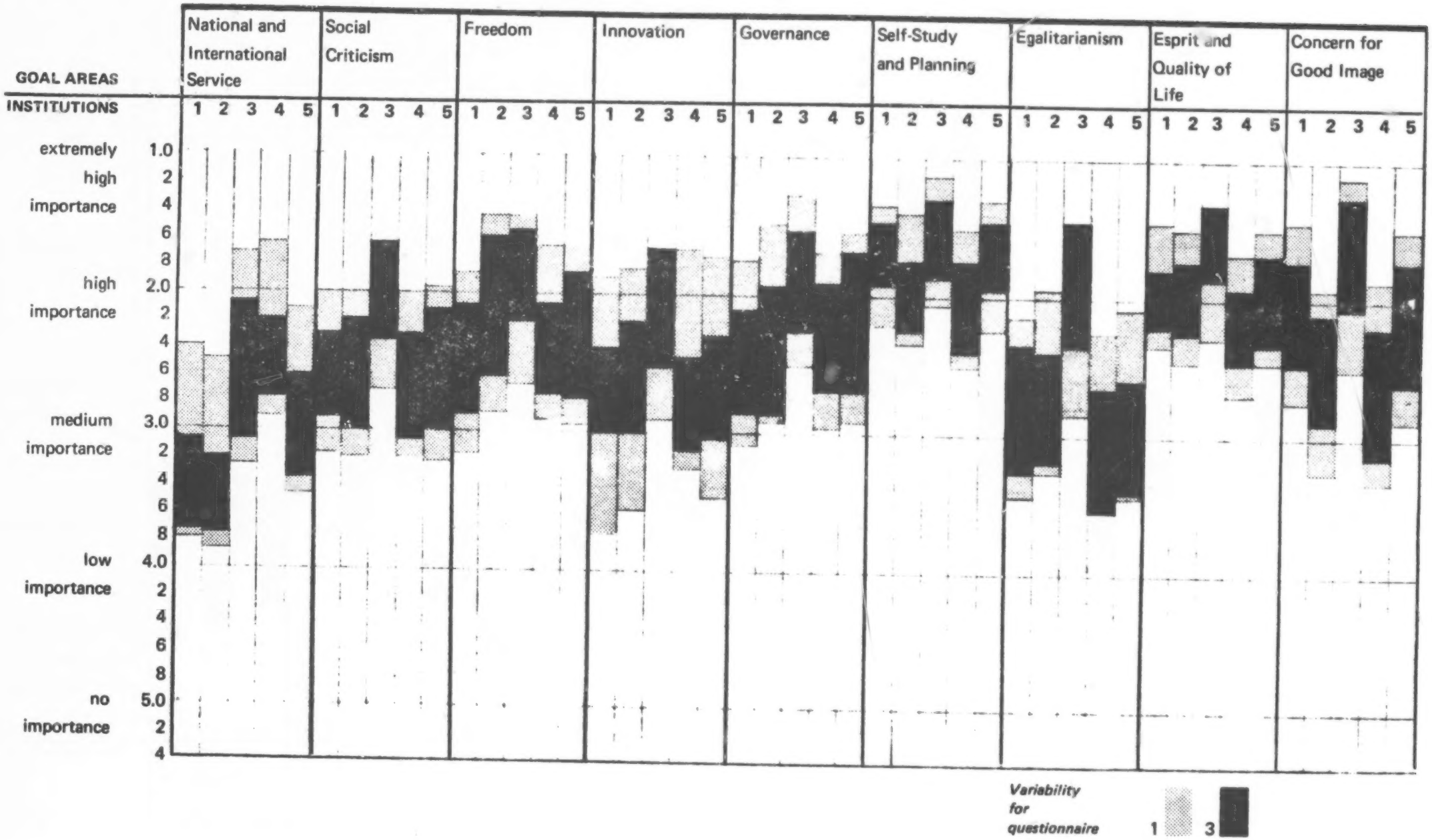


FIGURE 7. (continued)



for each goal area and illustrates well the individual differences among the schools.

These results indicate that it is possible through use of the Delphi technique to obtain convergence of opinion among the participants in the eighteen goal areas included in the IGI.

In addition to evaluating convergence among individuals, it is possible to examine the degree of convergence among groups. As discussed in a previous section, Institution and Group Comparisons, the goal areas were ranked separately for each group with regard to the mean importance attached to the goal area by that group. By calculating the degree of relationship between the rankings of two groups (such as faculty and administrators), it is possible to identify the degree of similarity in goal ratings between every pair of groups. Spearman's rank-order rho was again the statistic used to examine this relationship. As reported in more detail in the Institution and Group Comparisons section, with very few exceptions the similarity in rankings of groups at any institution was extremely high (median rho in the .90s) according to data obtained on the third questionnaire. This is in contrast to the data obtained on the first questionnaire which indicated a much lower degree of similarity (median rho in the .60s). These results were consistent for the ratings of both present and preferred importance.

Thus convergence of opinion occurred through the use of the Delphi technique among both individuals and groups participating in the study.

Types of judgments involved. It is important to realize that ratings of preferred importance are asking for value judgments, while ratings of present importance are asking for factual judgments. Whether or not basic conceptual differences are involved, value judgments are certainly much more vague and more difficult to validate. While the Delphi technique has been used in

several studies to obtain value judgments, the experimental work on the Delphi technique has been confined to factual judgments.

Two questions, both concerned with the types of judgments being made, will be considered in this section. (1) Since ratings of present and preferred importance involve different types of judgments, would feedback of information influence these different types of judgments in the same manner? (2) Can the accuracy of the ratings of preferred importance (value judgments) be validated?

While carefully designed experiments, rather than field studies such as this one, are needed to answer the first question, the results from this study may provide some hypotheses. An examination of the present importance attached to the different goals at each of the five institutions indicated that significant convergence of opinion among the participants occurred in all goal areas. The multivariate F associated with this effect of convergence was based upon two dependent variables, the change from questionnaires 1 to 2 and from questionnaires 2 to 3. By examining the univariate Fs corresponding to these two dependent variables, it is found that when 14 of the 18 goal areas are rated in terms of present importance the significant convergence occurs from the first to the second questionnaires and the amount of convergence occurring between the second and the third questionnaires is not statistically significant. In some goal areas a small amount of divergence occurs in the responses to the third questionnaire. The RAND Corporation (Dalkey, 1969) also reports that they found feedback of reasons did not increase the convergence of responses, in their experiments using questions of the almanac-type (e.g., What were the number of telephones in Africa in 1966?) These results are in contrast to the ratings of the same goal areas in terms of preferred importance. In the latter case,

in 15 of the 18 goal areas, a significant amount of convergence occurred from questionnaire 2 to questionnaire 3. Thus the reasons given on the third questionnaire to support extreme views may act differentially for factual and value judgments. Another possibility is that with factual information the amount of convergence between questionnaires 1 and 2 is so great that it is very difficult to produce any additional convergence.

Several post hoc explanations for the differences in the results obtained using factual and value judgments can be offered, but only through carefully designed experiments can this issue be clarified.

Different opinions exist with regard to whether value judgments can be validated. A widely held opinion is that there is no clear sense in which value judgments can be said to be accurate. However, another opinion is offered by Dalkey (1969). He states: ". . . . value judgments are factual statements of an especially complex, vague, and in general much more speculative sort than the usual descriptive inputs to decision situations."

A great amount of time and money is spent in making value judgments. This would be difficult to justify if there is no degree of correctness that can be attached to a value judgment. However, it is difficult to believe that there is not some degree of correctness or accuracy, however weak, attached to value judgments. For example, in forming a new college, the Board of Trustees and the President, after much deliberation, decide on the objectives of the institution. They are not likely to accept the judgment that any other set of objectives is as good as theirs and therefore they are attaching some degree of correctness to their list. If the assumption can be accepted that there is some degree of accuracy associated with value judgments such as those which were rated in terms of preferred importance in this study, how may this accuracy be validated? Several possibilities

exist. It would seem that in rating these statements in terms of preferred importance, certain responses are more likely than others. Thus, one criterion could be reasonableness. For example, it would be unreasonable to expect Institution 1, an institution closely related to its denominational church, to rate Religious Orientation as very low in preferred importance or for Institution 2, a four-year liberal arts institution, to rate Research as very high in preferred importance. In general, faculty, administrators, and students are attracted to institutions which presently stress goal areas that they think important. Thus, it would be reasonable to assume that those institutions that are presently very different will desire to remain very different. This assumption leads to the prediction that, for each school, the school most unlike it can be selected regardless of whether the goal priorities were based on present or preferred importance. If this prediction is accurate, it provides some support for the validity of the preferred importance ratings. To test this prediction, Spearman's rank-order rho was calculated as a measure of the degree of dissimilarity between the goal priority rankings of each pair of institutions for both present and preferred ratings of importance. The results are presented in Table 11. The present goal priorities of Institution 4 are most dissimilar to the present goal priorities of Institution 1. Similarly, for Institution 2, Institution 4 is most dissimilar; for Institution 3, Institution 4 is most dissimilar; for Institution 4, Institution 1 is most dissimilar; and for Institution 5, Institution 1 is most dissimilar. Identical results are obtained for the preferred goal priorities, thus providing support for the accuracy of the preferred importance ratings.

If these ratings of preferred importance possess some degree of accuracy, another expectation would be that the judgments should exhibit

TABLE 11

MEASURES OF SIMILARITY AMONG SCHOOLS AS INDICATED BY SPEARMAN RANK-ORDER RHOS BASED UPON PRESENT AND PREFERRED (IN PARENTHESES) IMPORTANCE RATINGS FROM QUESTIONNAIRE 1*

Institution	1	2	3	4	5
1	-	.81 (.87)	.69 (.91)	.28 (.62)	.55 (.80)
2	.81 (.87)	-	.78 (.87)	.38 (.74)	.71 (.80)
3	.69 (.91)	.78 (.87)	-	.56 (.84)	.82 (.93)
4	.28 (.62)	.38 (.74)	.56 (.84)	-	.70 (.89)
5	.55 (.80)	.71 (.80)	.82 (.93)	.70 (.89)	-

*The larger the number, the greater the similarity.

a reasonable amount of group reliability, i.e., two highly similar groups should express similar judgments. According to Gross and Grambsch (1968) and verified by ratings of present importance in this study, faculty and administrators are two highly similar groups. Also, it was reported earlier in the Institution and Group Comparisons section, that students and faculty had very similar goal rankings based upon present importance ratings. Therefore, it is expected that the goal ratings in terms of preferred importance of these similar groups will be very similar at each institution.

The value of the Spearman rank-order rho between the present importance ratings of goal areas, based on responses to questionnaire 1, by faculty and administrators for each school are: .93, .95, .78, .92, and .93, respectively. With the possible exception of school 3, this verifies that these two groups are highly similar in their rankings of the present importance of goal areas. The corresponding values of the preferred importance rankings of goal areas based on responses to questionnaire 1 by faculty and administrators are: .98, .86, .91, .92, and .89. Therefore, the above expectation is supported for faculty and administrators. The results for faculty and students based upon present importance ratings are .89, .89, .80, .99, and .95 while for preferred importance ratings the values of .91, .87, .89, .91, and .93 are obtained, again supporting the above expectation. These results provide additional support for the accuracy of the preferred importance ratings.

If these ratings of preferred importance attain some degree of accuracy, a third expectation would be that they would converge given iteration with feedback. This expectation is suggested by Dalkey (1969). He bases this partly upon the consideration that if there is a judgment that the participants

are trying to approximate, then individual judgments should be influenced in a reasonable way by the additional information furnished by feedback from the group. His other consideration is by analogy with factual judgments. Of course, the attainment of convergence has already been demonstrated.

In summary, based upon the assumption that the accuracy of value judgments can be validated, three predictions concerning the ratings of preferred importance were made and all three were confirmed, providing support for the basic assumption.

Accuracy of convergence. Another important question concerning the process of convergence is whether convergence leads to more or less accurate data. Considering ratings of present importance first, Table 8 can assist the answering of this question. In the IGI Evaluation Section, data reported from the first questionnaire was used to demonstrate the validity of different IGI goal areas by comparing these means with the results of independent ratings. It has already been illustrated that significant convergence has occurred in all goal areas from questionnaires 1 to 3. If accuracy has not been sacrificed as a result of this convergence, then the means obtained from the third questionnaire should still discriminate between those institutions selected by the independent raters as attaching the greatest and least present importance to each goal area.

By comparing in Table 8 the means for questionnaire 3 and the ratings of the independent raters, it is found that of the twelve goal areas in which the raters were able to select institutions attaching the greatest and least importance, eight were in complete agreement; four were in agreement with the selection of the institution attaching highest importance but not with the one attaching lowest importance. In two of the latter four goal areas , those institutions obtaining the highest and lowest means on

the third questionnaire are not different from those on the first questionnaire. In those three goal areas where only the institution rated as attaching highest importance could be identified, complete agreement was attained.

Summarizing, of the eighteen goal areas, three could not be tested; another three could be partially tested and were found to be in agreement; of the remaining twelve, eight were in complete agreement, and the other four partially agreed. Thus, based upon the mean importance ratings on the first and third questionnaires, identical results were obtained, with the exception of two goal areas (Financial Soundness and Vocational Preparation) in which agreement was not obtained with regard to the selection of the institution attaching lowest importance. This would lend support to the contention that accuracy is not lost with convergence. But is any accuracy gained?

In the above analyses, only the mean has been considered. Notice in Table 8 that the standard deviations consistently decrease from the first to the third questionnaire since convergence is occurring. If it is again assumed that the raters were correct in selecting the institutions attaching greatest and least present importance to each goal area, the lower standard deviation on the third questionnaire indicates that there were fewer people in error. For example, in the goal area of Intellectual Development on the first questionnaire, there will be a number of participants from the institution selected as attaching highest importance to this goal who rate the present importance of this goal area at their institution as low or lower in importance than the mean of the institution selected as attaching lowest importance to this goal area, and vice versa. By our definition, these people are in error. As indicated by the much lower standard deviation on

the third questionnaire, there are many fewer people in error in their responses to the third questionnaire. In the last column of Table 8, the F values (which demonstrate the significant differences in the means of the institutions selected by the independent raters) are, for almost all cases, considerably larger for the third questionnaire than for the first, again indicating this smaller error, and the greater ease by which these extreme institutions can be differentiated.

Perhaps a more practical illustration is to consider the decrease in the number of groups in error from the first to the third questionnaire as measured by the individual group means. Figures 8, 9, and 10 illustrate the values of the group means and the total mean (asterisk) for each of the three questionnaires at three different institutions. Figure 8 represents Institution 5, one of the two schools rated by independent raters as attaching lowest present importance to this goal area, while Figure 9 represents Institution 1, the school rated as attaching highest present importance to this goal area. Notice in comparing Figures 8 and 9 that each institution's group means are closer in value to the overall mean of their institution than to the overall mean of the other institution. Therefore, the procedure for measuring error being employed would indicate that none of the groups were in error in their responses to any of the questionnaires. Now make the same comparison between Figures 9 and 10 (Institution 4, which was the other institution rated as attaching lowest present importance to this goal area). Notice that the value of the mean of the alumni group (G) at Institution 4 is closer to Institution 1's mean than its own institution's mean on the first questionnaire. However, note this group's mean on questionnaires two and three; on each questionnaire it comes closer to its own institution's overall mean so that on the latter two questionnaires the mean of the alumni

FIGURE 8. PLOT OF GROUP MEANS INDICATING A GROUP'S PERCEPTION OF THE PRESENT IMPORTANCE OF RELIGIOUS ORIENTATION GOALS FOR INSTITUTION 5
(The position of each letter represents the mean value for that group)

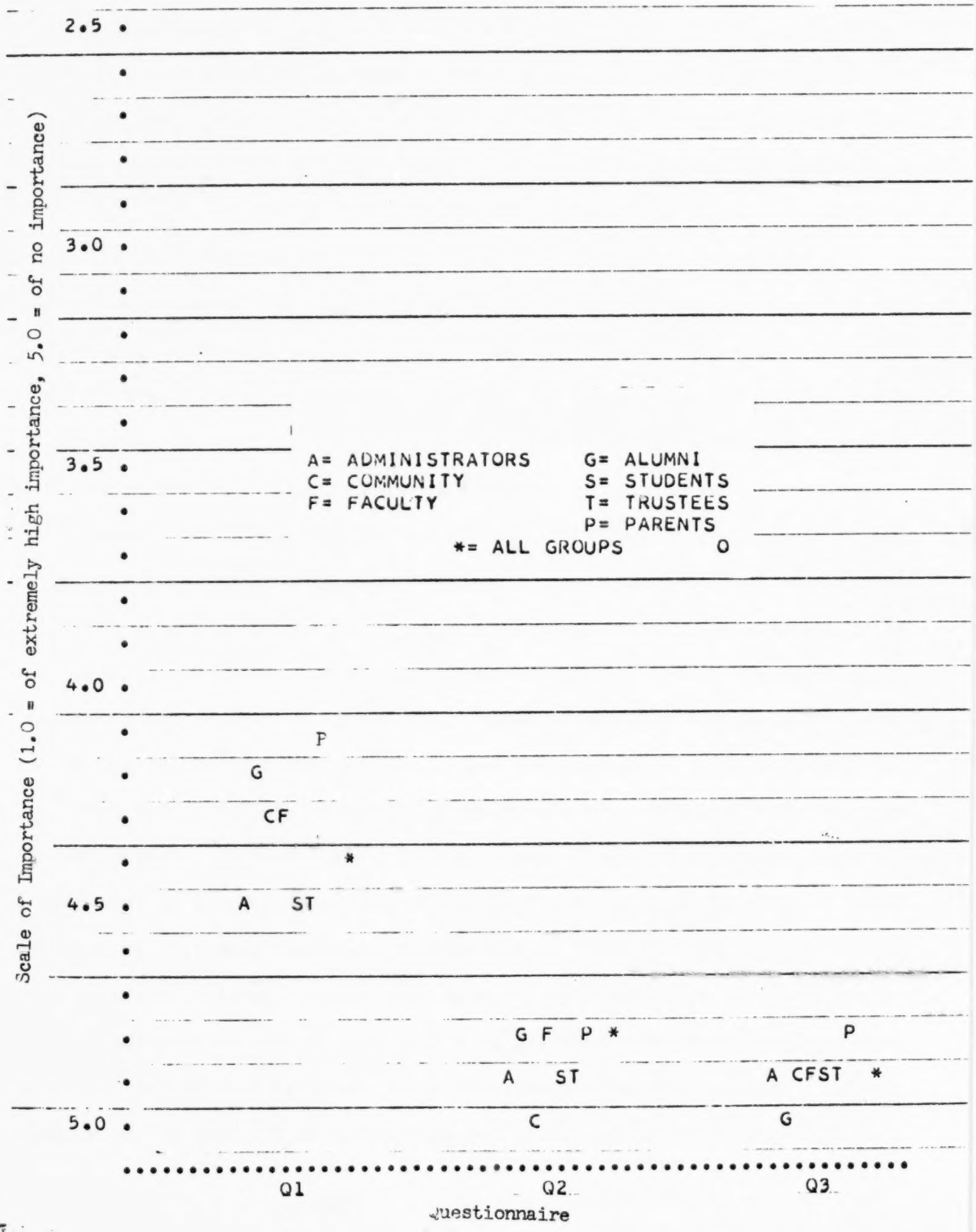


FIGURE 9. PLOT OF GROUP MEANS INDICATING A GROUP'S PERCEPTION OF THE PRESENT IMPORTANCE OF RELIGIOUS ORIENTATION GOALS FOR INSTITUTION 1
(The position of each letter represents the mean value for that group)

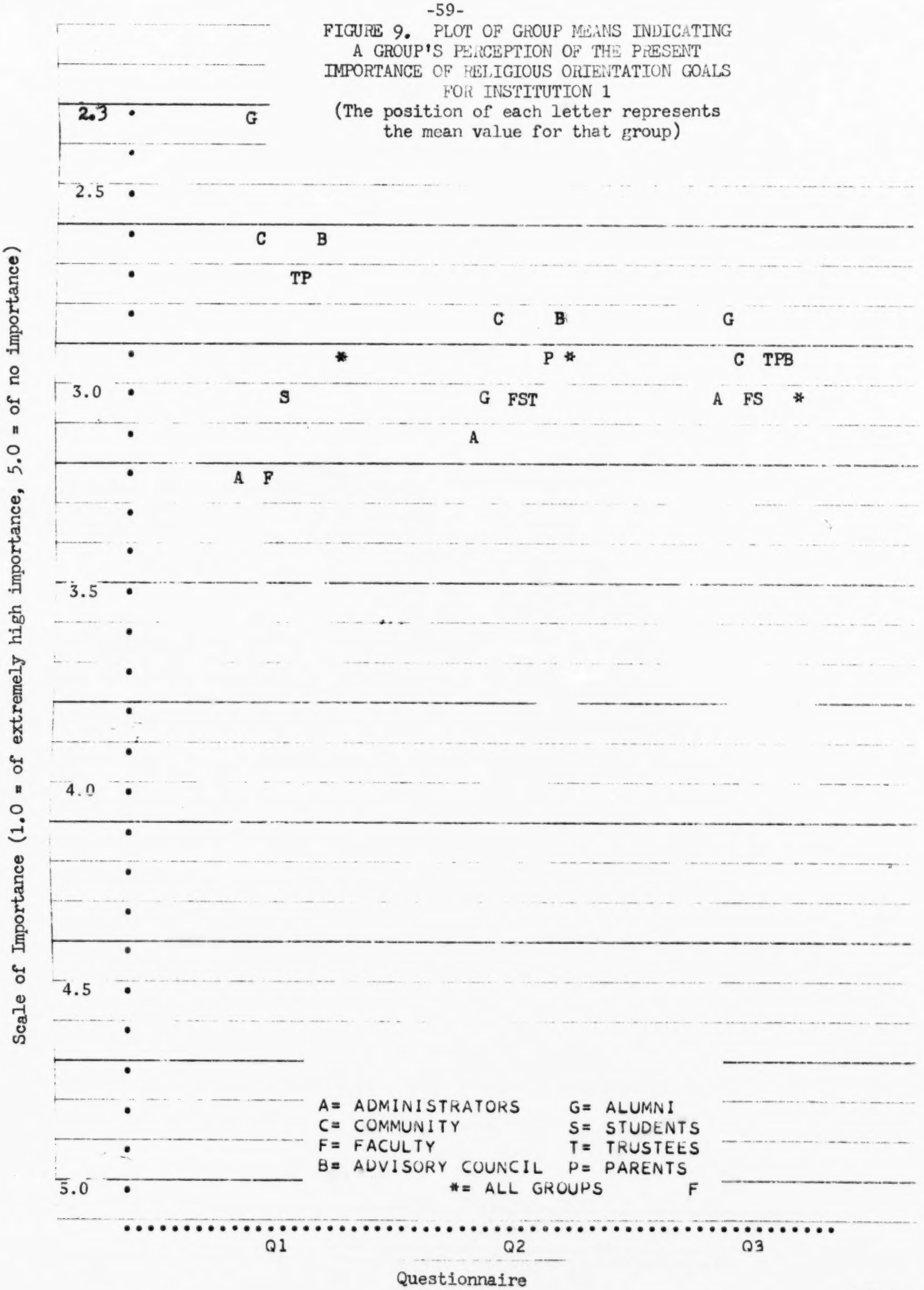
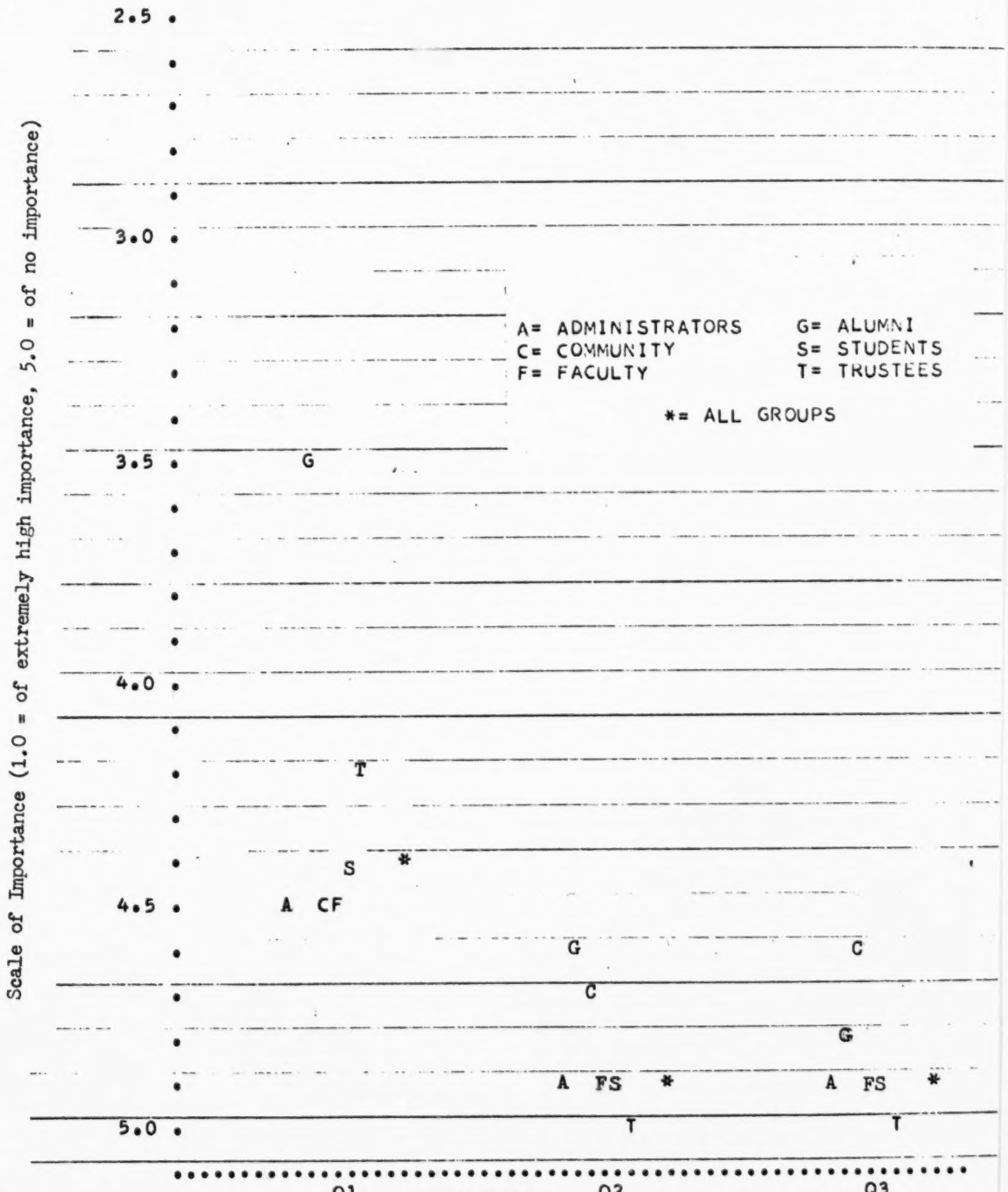


FIGURE 10. PLOT OF GROUP MEANS INDICATING A GROUP'S PERCEPTION OF THE PRESENT IMPORTANCE OF RELIGIOUS ORIENTATION GOALS FOR INSTITUTION 4
(The position of each letter represents the mean value for that group)



group is much closer to its own institution's mean than to Institution 1's overall mean. Thus, while the alumni group would be considered to have an erroneous judgment on the first questionnaire, their judgment on the second and third questionnaires is not considered to be in error.

Each goal area was investigated and the number of group errors (as defined above) made in response to each questionnaire was tabulated. It was found that of the 184 groups investigated, 22 groups were in error on the first questionnaire, one group was in error on the second questionnaire, and five groups were in error on the third questionnaire. Thus, in terms of group ratings of the present importance of goals, strong support is demonstrated for there being an increase in accuracy in the responses to questionnaires 2 and 3.

In a previous discussion of the types of judgments involved in the ratings of present and preferred importance, three predictions were supported based upon the assumption that the accuracy of ratings of preferred importance can be validated. One of these predictions was that those institutions that were presently very different will desire to remain different. To investigate the accuracy of this prediction, Spearman's rank-order rho was employed as a measure of the degree of dissimilarity between the goal priorities of each pair of institutions using the present and preferred ratings of importance from questionnaire 1. These results which supported the prediction were shown in Table 11. If accuracy is not sacrificed to obtain convergence on ratings of preferred importance, it would be expected that similar results would be obtained with regard to preferred importance whether ratings from questionnaire 1 or 3 were used. Table 12 presents these results, based upon the preferred importance data from questionnaires 1 and 3. The similarity is apparent. If, for each school, a rank ordering

TABLE 12

MEASURES OF SIMILARITY AMONG SCHOOLS AS INDICATED BY SPEARMAN RANK-ORDER RHOS BASED UPON PREFERRED IMPORTANCE RATINGS FROM QUESTIONNAIRE 1 AND QUESTIONNAIRE 3 (IN PARENTHESES)*

Institution	1	2	3	4	5
1	-	.87 (.91)	.91 (.88)	.62 (.67)	.80 (.77)
2	.87 (.91)	-	.87 (.74)	.74 (.67)	.80 (.71)
3	.91 (.88)	.87 (.74)	-	.84 (.72)	.93 (.80)
4	.62 (.67)	.74 (.67)	.84 (.72)	-	.89 (.77)
5	.80 (.77)	.80 (.71)	.93 (.80)	.89 (.77)	-

*The larger the number, the greater the similarity.

of the other schools in terms of similarity was performed, only three changes would be made in the rankings, one of which was a tie. Thus, in this situation, there doesn't seem to be any loss of accuracy with convergence.

In summary, it was found that the process of convergence did not produce less accurate data, and there is at least one indication where the accuracy was increased.

Summary of Results, Conclusions, and Implications

While there were several purposes for the study, two main objectives of this paper were to report (1) how well the preliminary form of the Institutional Goals Inventory identifies an institution's goals as perceived by different groups, and (2) whether the Delphi technique produces opinion convergence among different on-campus and off-campus groups with regard to an institution's goals. A summary of results and conclusions with regard to these two objectives is presented in this section, followed by a discussion of the study's limitations and implications.

Institutional Goals Inventory[4]

A conclusion based upon the results obtained from a variety of different types of data is that, with the exception of two goal areas, the preliminary form of the IGI served its purpose well. A brief summary of the results leading to this conclusion follows.

1. An unusually high percentage of participants (75%) completed the three questionnaires. It is highly unlikely that this excellent parti-

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[4]ETS has copyright ownership of this instrument, but has granted to RELCV a five year royalty free non-exclusive license to reproduce and use the IGI in connection with its program of AOS in its consortium colleges and universities.

cipation would have been possible if the participants did not view the instrument as adequately measuring their goal perceptions and values.

2. Very few goal statements were modified or additional goal statements added, even though space was provided for this purpose.

3. The 108 reliability estimates (coefficient alphas for "is" and "should be" and for each questionnaire), with the exception of the Innovation and Financial Soundness areas, were as high or higher than would ordinarily be expected from scales composed of 3 to 8 items constructed on a priori bases. Omitting the reliabilities from the above two areas, 82 of the 96 remaining reliability estimates were above .60 with a median value of .77. Thus, 16 of the 18 goal areas were sufficiently reliable for group comparisons within or among institutions.

4. Independent of the results of this study, five specialists in higher education who had some familiarity with the institutions participating in this study, were asked to select the institutions that they thought would attach the greatest and the least present importance to each goal area. In twelve goal areas the independent raters were able to identify those institutions that they thought would attach the greatest and least present importance to each goal area. In another three goal areas (Social Criticism, Esprit and Quality of Life, and Concern for Good Image), they could agree on the institutions which would attach greatest importance but not the ones attaching least importance. Thus, 27 selections were made independently of the data collected in this study, 15 representing greatest importance and 12 representing least importance. (In the remaining three goal areas of Innovation, Governance, and Self-Study and Planning, there was not sufficient agreement among the raters at the low or high importance end.)

By comparing these ratings with the mean ratings of the participants at each institution, it was found that 24 of the 27 selections by these independent raters were verified by the data from the IGI.

Delphi Technique

Two ways in which the procedure employed in this study differed from the standard Delphi technique were: (1) in the use of groups of constituents who were not necessarily experts and (2) in the use of a specially designed instrument to assess the ratings of importance for stated goals (Institutional Goals Inventory). Since including representatives of both on and off-campus groups was an objective of this study, it was not an objective to employ experts per se. The results of experiments by Brown, Cochran, and Dalkey (1969) using students as participants suggest that there is no great loss in including less knowledgeable individuals as long as some individuals are knowledgeable in the subject area. While the use of the IGI, the second difference noted above, is in contrast to the standard Delphi procedure of asking each participant to provide a list of institutional goals that they thought were important, it offers at least three advantages, especially when there are a large number of participants. One advantage is that of time. If there are a large number of participants, there usually is not enough time between rounds 1 and 2 to combine the individual lists and devise an adequate set of clear goal statements. In contrast, in developing the instrument before the start of the study, it is possible to write, test, and revise the goal statements until they are satisfactory. Another advantage is that in the development of an instrument it is possible to include as many experts as desired to ensure that statements are not omitted which may be of value. If the sample participating in the study are not experts, it is more likely that important statements may be omitted. A

third advantage of using a valid instrument is that it greatly simplifies the task for the participants. In goal studies which have not used an instrument and have had several hundred participants (e.g., Norton, 1970, and Cyphert and Gant, 1971), a greater percent of their sample was lost in this first step than in all other steps combined.

While the goal areas in which convergence occurred varied by institution, with no institution obtaining convergence in all goal areas, the results demonstrate that it is possible through the use of the Delphi technique to obtain convergence of opinion among both individual participants and groups in any of the 18 goal areas included in the IGI. In the ratings of the present importance of the goal statements, with few exceptions, all the convergence occurred on the second questionnaire when the modal values were given. However, with ratings of preferred importance the results indicate that, while most of the convergence again took place when the modal values were fed back, additional convergence occurred on the third questionnaire when the feedback of reasons was also given. Differences between these two types of judgments were discussed and several predictions to test their accuracy were made and confirmed.

Since it was demonstrated that convergence of opinion does occur, a question of importance is whether its occurrence leads to more or less accurate data. Results indicated that the process of convergence certainly did not lead to less accurate data and in some instances the accuracy was improved.

General Conclusions

Thus, the instrumentation and technique used in this study to assess the present and preferred goals of five colleges and universities with quite

different characteristics were successful. Not only were they assessed, but in most goal areas where there existed some differences in opinion concerning the importance of the goal areas, agreement was achieved. This is not meant to imply that attitudes were changed; they may or may not have been. It may have been that changes occurred through feedback as a result of participants considering dimensions of the problem which they had not previously considered. For whatever reason, the different groups came to much greater agreement as to what the present goals of the institution are and what they should be. The degree to which the instrument and the technique worked together is well demonstrated by the excellent participation achieved.

Limitations

Due to financial restrictions, a larger sample could not be selected. Such questions as the following could be answered, had a larger sample been employed. If a person is fed back his previous response along with the modal response, will convergence be hindered or facilitated? If a person is fed back his own group's modal response rather than, or in addition to, the overall group's modal response, how will it affect the degree of convergence? While convergence did occur in this study, experimental studies are needed to investigate why convergence occurs.

While the preliminary form of the Institutional Goals Inventory accomplished its job remarkably well, it can be improved. Hopefully, within a short time, ETS will have a form of the IGI that will be available to all institutions.

Major on and off-campus events are likely to affect the ratings of importance given to individual goal statements. For example, on one campus it was difficult to understand the ratings of certain goal statements. However, when it became known that there had been a major confrontation on

this campus shortly before one of the questionnaires was sent, the change in ratings was very interpretable. Thus, when interpreting the results from these questionnaires, one should be aware of the major events or unusual changes which have occurred between questionnaires and consider their possible effect on the ratings.

Implications

The Assembly on University Goals and Governance has asserted, as reported in The Chronicle of Higher Education (1971a): "One thing is clear. If the colleges and universities are to improve themselves, they need to become more self-conscious about themselves, more understanding of what they have been and better informed about what is happening to them, and what their strengths and weaknesses are."

The present study investigates the suitability of combining a goals instrument and the Delphi technique to assist higher education institutions in achieving a better understanding of their goals as seen by different on and off-campus groups. Through use of this procedure, an institution not only finds out what these varied groups agree are its present goals but also in what directions they agree that the institution should be heading. Of course, another approach toward achieving some consensus among these groups with regard to the institution's goals is to have face-to-face discussions. However, much research (e.g., Kelley and Thibaut, 1954, and Asch, 1958) indicates that agreement is less likely to happen in face-to-face discussions. Also, as Dalkey (1969) reports in some experiments using almanac-type questions comparing face-to-face discussion with the Delphi technique, more often than not the face-to-face discussion leads to less accurate group conclusions while the Delphi technique more often than not leads to more accurate group conclusions. Thus, the application of the Delphi technique may be a more

useful way of deciding upon goals than the more commonly used method of committees, faculty meetings, meetings of department heads, etc. It also can be less time consuming. Therefore, this technique should be useful in institutional planning as a part of a continuing evaluation process, and as an input into RELCV's Administrative-Organizational Systems.

One example of how these results might be useful in planning is to identify those goal areas with a large discrepancy between present and preferred importance. These differences can be viewed as an indication of the degree of satisfaction with the present importance given to each goal area. Then from these goal areas selected because of their large discrepancy, those highest in preferred importance can be identified. The areas that meet these two criteria have the greatest potential for causing dissatisfaction, tension, and even conflict. By examining the data from each group, the group or groups possessing this potential can be identified. By examining the ratings of the individual goal statements which comprise each goal area, greater insight into the nature of the dissatisfaction may be obtained.

Using the IGI as part of the Delphi technique may also be of value in other ways. For example, it is possible for the president of an institution to learn a great deal about the goal opinions of different groups. Not only can he learn what the majority believes to be important goals, but he can also become aware of minority beliefs and the reasons behind these opinions. While the individual respondents remain anonymous, each group can be coded so that the president can identify those groups who strongly support a goal and those who do not, and the reasons for the minority opinions. This would not only be useful to the president, but it would provide each group with a better understanding of the perceptions and values of other groups who are

also concerned with the institution. It also offers a way for a new, high level administrator to become quickly familiar with the perceptions and thinking of different groups with which he will be working. In a short period of time he can obtain insight into the interrelationships of groups within his institution by reviewing the results of several administrations of the questionnaire. Instead of taking several weeks or months feeling his way, a profile of each group in terms of goals is immediately available to him.

The technique has also been found to be useful in curriculum development in a higher education setting. The following is quoted from an article appearing in College and University Business (Judd, 1970): "In essence Delphi permits gaining the individual views of all while not submerging the individual views of anyone. Does the process (Delphi technique) work in higher education? The chairman of a liberal arts college's committee charged with developing the curriculum for a new branch campus used Delphi and concluded: 'I would use the Delphi method wherever I knew there would be quite a variety of attitudes in an organization, such as a faculty, and where I wanted to ascertain what kind of consensus you could achieve. I think it aided us tremendously in knowing what we were "getting into." We came out of this Delphi experience with a highly innovative and experimental type of curricular program that has been adopted by an extremely conservative faculty.' "

In these critical times for higher education, communities are being called upon to rethink their fundamental orientations. It is important that institutions develop rational processes by which some agreement can be achieved among their constituent groups with regard to their goals.

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APPENDIX A

AREAS REPRESENTED ON THE IGI

APPENDIX A*

AREAS REPRESENTED ON THE IGI**

Financial Soundness

21. To intensify efforts to increase the institution's financial resources
42. To increase the number and diversity of sources of income.
105. To apply cost criteria to curricular and instructional alternatives.

Non-Academic

1. To help students develop social skills, poise, and confidence.
22. To provide students with opportunities to develop lasting friendships.
43. To provide opportunities for students to find marital partners.
57. To establish a period of the student's lives which can always be remembered for its fun, friendship, and freedom.
86. To provide a strong program of intercollegiate participation in musical activities, athletics, etc.
104. To provide a strong intramural athletic program.

Intellectual Development of the Student

2. To help students develop the ability to apply critical thought to all areas of life.
12. To help students develop the ability to speak and write effectively.
23. To increase the desire and ability of students to undertake self-directed study.
44. To help students acquire depth in at least one area of knowledge.
58. To instill in students a respect for knowledge for its own sake.
67. To assist students acquire a basic knowledge in the humanities, social sciences, and natural sciences.
103. To help students develop the ability to synthesize knowledge from different sources.

Personal Development of Student

3. To promote concern in students for the well-being of others.
17. To prepare students for the duties and responsibilities of citizenship.
24. To enable students to develop a set of principles to guide their behavior.
37. To help students to lead satisfying personal and social lives.
59. To help students develop the capacity to assume leadership.
68. To help students develop a respect for their own abilities and an understanding of their limitations.
91. To help students develop an appreciation of cultural activities (e.g., literature, art, drama, music).
102. To help students in the choice of a personally satisfying vocation.

Vocational Preparation

4. To ensure that students will be well qualified for a vocation.
25. To help students achieve positions of status and leadership in society.
38. To help students acquire the ability to adapt to new occupational requirements as technology and society change.
45. To provide an opportunity for re-educating and retraining those whose vocational capabilities have become obsolete.
69. To provide students with an opportunity to acquire a broad understanding of the variety of occupational possibilities.

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**The numbers indicate the order in which the statements appear on the questionnaire.

Vocational Preparation Cont

76. To provide a wide range of opportunities for specific occupational preparation, e.g., accounting, engineering, pharmacy, etc.

Religious Orientation

5. To educate students in a particular religious heritage.
26. To teach students to espouse and defend a theological position.
46. To strengthen the religious faith of students.
61. To help students develop a dedication to serving God in everyday life.
77. To help students become aware of the potentialities of a full time religious vocation.
101. To enable the student to see religious significance in all activities.

Training of Graduate and Professional Students

6. To provide, through graduate programs, new generations of scholars and scientists.
27. To provide a strong professional training in various areas (e.g., law, medicine, business, education, etc).
60. To expect faculty who teach in the graduate school to perform research.
78. To have faculty provide, by example, research models for students.
100. To discover and encourage exceptional scholars and professionals who will attain eminence and bring recognition to the institution.

Research

7. To conduct research which may facilitate the solution of specific social, economic, or technological problems.
28. To perform applied research for government, business, or industry.
47. To contribute to the advancement of knowledge for its own sake.
70. To provide research opportunities for the intellectual growth of the faculty.
87. To attract faculty who have distinguished themselves through research and scholarly contributions.
98. To reward excellence in research and scholarly inquiry through promotions and salary increases.

Local and Regional Services

8. To serve as an educational agency for the surrounding community.
29. To be responsive to the cultural needs of the local community
48. To help solve social, economic, or political problems in the immediate geographical area.
56. To reward faculty who provide outstanding service to the local or regional area through promotions and salary increases.
71. To apply the technical expertise available at the institution to the solution of state and regional problems.
79. To prepare students for service to the community.
88. To provide educational opportunities for adults in the local area.
97. To provide opportunities for advanced level, adult continuing education.

National and International Service

9. To apply resources of the institution to the solution of major national problems.
30. To help formulate programs in a number of public policy areas such as pollution control, urban renewal, and health care.
62. To provide technical assistance to agencies of the national government.

National and International Service Cont

74. To give technical assistance to developing nations.
82. To give technical assistance to agencies for international development.
96. To assist in efforts to achieve and maintain world peace.
99. To help students develop a sense of responsible membership in the world community.

Social Criticism

10. To provide critical evaluations of prevailing practices and values in American society.
31. To help students acquire respect for prevailing political and social institutions in America.
49. To function as an agent of direct social action.
63. To enable students to understand the value of dissent in a democratic society.
72. To encourage students to become aware of social problems.
80. To help students learn how to change society.

Freedom

11. To ensure that students have the opportunity to hear all points of view.
32. To protect a faculty member against intimidation by those who do not approve of ideas he may present in the classroom.
50. To ensure the right of faculty members to engage in off-campus political activities without fear of reprisal from the institution.
64. To allow wide latitude in the choice of topics that faculty members choose for their research as long as the research is conducted in a responsible manner.
73. To permit an undergraduate student wide latitude in selecting the courses he will take toward his degree.
81. To permit students to publish their own newspaper without approval of content by the faculty or administration.
89. To ensure the freedom of students to make their own decisions about dress and personal appearance.
95. To ensure the rights of students to engage in off-campus political activities and social actions without fear of reprisal from the institution.

Innovation

13. To experiment with new forms of instruction.
33. To innovate in developing educational programs for special categories of students e.g., disadvantaged students, very bright students, foreign students, etc.
83. To protect valuable traditions against unwarranted change.

Governance

14. To ensure student participation in institutional decision-making.
34. To ensure that all those who are affected by an institutional decision have an opportunity to express their views on it before it is made.
51. To ensure faculty participation in institutional decision-making.
84. To decentralize decision-making to the greatest extent feasible.

Self-study and Planning

15. To respond to internal needs and goals of the institution rather than to external pressure.
35. To establish and clearly define the purposes the institution will serve.
52. To establish a long-range plan for the institution.
85. To re-examine periodically the degree of concensus concerning the institution's purposes.
94. To provide a continuing plan of curricular and instructional evaluation for all programs.

Egalitarianism

16. To make available financial assistance so that any academically qualified student is able to enroll and remain in college.
36. To make special efforts to attract faculty members who are also members of minority groups.
53. To provide some form of education for any student, regardless of his academic ability.
65. To encourage students to view members of various religious groups, minority groups, etc., as individuals rather than as members of a particular group.
93. To allocate percentages of the total enrollment for minority groups or groups having low socioeconomic status.

Esprit and Quality of Life

18. To encourage a concern for the welfare of the institution among faculty members, students, and administrators.
39. To maintain an atmosphere of intellectual excitement among faculty, students, and administrators.
54. To encourage mutual trust and respect among faculty, students, and administrators.
66. To maintain a distinctiveness that sets the institution apart from other institutions.
75. To maintain an environment of amicable social discourse.
92. To provide a supportive environment for highly creative individuals.

Concern for Projecting Good Image

19. To insure confidence of alumni and other financial contributers.
40. To make sure that the institution receives its share of favorable attention in the mass media.
55. To encourage students and faculty to compete for prestigious awards such as Rhodes Scholarships, Fullbright Fellowships, etc.
90. To avoid having the reputation of the institution damaged by the action of a few students or faculty.

Miscellaneous

20. To base faculty promotion and tenure more on an estimate of teaching effectiveness than on the value of scholarly research.
41. To reward excellence in teaching through promotions and salary increases.

APPENDIX B

IGI-PRELIMINARY FORM

(reduced in size)

INSTITUTIONAL GOALS INVENTORY

A preliminary form developed for research purposes by Educational Testing Service

This questionnaire is completely confidential. No one will see your responses except professional staff working on this project from the Educational Testing Service and the Regional Education Laboratory for the Carolinas and Virginia. All results will be summarized by groups; individual results will not be released. However, for purposes of monitoring questionnaire returns, we need your name and position. Please complete the following:

YOUR NAME: _____

YOUR POSITION(S): (Please indicate by checking appropriate space or spaces.)

Administrator _____ Alumnus _____ Community Leader _____

Department Chairman _____ Faculty _____ Student _____

Trustee _____ Other _____

NAME OF INSTITUTION BEING RATED: _____ _____

Please give us below an indication of your familiarity with this institution. (Consider, for example, your familiarity with its programs, resources, history, and reputation):

VERY FAMILIAR _____ FAMILIAR _____ SLIGHTLY FAMILIAR _____ UNFAMILIAR _____

After completion of this questionnaire, please remember to *return* it in the enclosed envelope *within 5 days* to:

EDUCATIONAL TESTING SERVICE
MUTUAL PLAZA
DURHAM, N. C. 27701

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INSTITUTIONAL GOALS INVENTORY
(Preliminary Form)

INSTRUCTIONS

Colleges and universities serve a number of purposes, some of which may be regarded as more important than others. What do you consider to be the purposes of this institution? How important are these goals? Many of the more commonly mentioned goals of a college or university are listed on the following pages. Some may be thought of as "output" or "ultimate" goals (e.g., "to promote in students concern for the well-being of others"), while others are more appropriately classified as "support" or "maintenance" goals (e.g., "to experiment with new forms of instruction"). In this study, both types are considered relevant in identifying the goals of an institution.

Each goal statement in this questionnaire is presented once, but you will be asked to react in two different ways:

First — How important *is* the goal at this institution at the present time? (Consider the institution as a whole in making your judgment.)

Then — In your judgment, how important *should* the goal *be* at this institution?

EXAMPLE

GOALS		of extremely high importance	of high importance	of medium importance	of low importance	of no importance
to assist students to prepare for graduate school	is	☐	☐	☐	☒	☐
	should be	☐	☒	☐	☐	☐

In the above example, the person has indicated that he believes the goal "to assist students to prepare for graduate school" is presently of low importance at this institution, but that it should be of high importance.

If you have extreme difficulty in responding to an item as it is worded, we would appreciate a brief indication of the problem in the "Comments" column. The questionnaire should not take longer than 45 minutes to complete. Do not spend undue time on any single item.

GOALS		of extremely high importance	of high importance	of medium importance	of low importance	of no importance	COMMENTS	For office use only
To help students develop social skills, poise, and confidence.	is	☐	☐	☐	☐	☐		11A___
	should be	☐	☐	☐	☐	☐		___
To help students develop the ability to apply critical thought to all areas of life.	is	☐	☐	☐	☐	☐		13A___
	should be	☐	☐	☐	☐	☐		___
To promote concern in students for the well-being of others.	is	☐	☐	☐	☐	☐		15A___
	should be	☐	☐	☐	☐	☐		___
To ensure that students will be well qualified for a vocation.	is	☐	☐	☐	☐	☐		17A___
	should be	☐	☐	☐	☐	☐		___
To educate students in a particular religious heritage.	is	☐	☐	☐	☐	☐		19A___
	should be	☐	☐	☐	☐	☐		___
To provide, through graduate programs, new generations of scholars and scientists.	is	☐	☐	☐	☐	☐		21A___
	should be	☐	☐	☐	☐	☐		___
To conduct research which may facilitate the solution of specific social, economic, or technological problems.	is	☐	☐	☐	☐	☐		23A___
	should be	☐	☐					___
To serve the higher education needs of youth from the surrounding community.	is	☐	☐	☐	☐	☐		25A___
	should be	☐	☐			☐		___
To apply resources of the institution to the solution of major national problems.	is	☐	☐	☐	☐	☐		27A___
	should be	☐	☐	☐	☐	☐		___
To provide critical evaluations of prevailing practices and values in American society.	is	☐	☐	☐	☐	☐		29A___
	should be	☐	☐	☐	☐	☐		___

Page 2 GOALS		of extremely high importance	of high importance	of medium importance	of low importance	of no importance	COMMENTS	For office use only
To ensure that students have the opportunity to hear *all* points of view.	is	☐	☐	☐	☐	☐		31A___
	should be	☐	☐	☐	☐	☐		___
To help students develop the ability to speak and write effectively.	is	☐	☐	☐	☐	☐		33A___
	should be	☐	☐	☐	☐	☐		___
To experiment with new forms of instruction.	is	☐	☐	☐	☐	☐		35A___
	should be	☐	☐	☐	☐	☐		___
To ensure student participation in institutional decision-making.	is	☐	☐	☐	☐	☐		37A___
	should be	☐	☐	☐	☐	☐		___
To respond to internal needs and goals of the institution rather than to external pressure.	is	☐	☐	☐	☐	☐		39A___
	should be	☐	☐	☐	☐	☐		___
To make available financial assistance so that any academically qualified student is able to enroll and remain in college.	is	☐	☐	☐	☐	☐		41A___
	should be	☐	☐	☐	☐	☐		___
To prepare students for the duties and responsibilities of citizenship.	is	☐	☐	☐	☐	☐		43A___
	should be	☐	☐	☐	☐	☐		___
To encourage a concern for the welfare of the institution among faculty members, students, and administrators.	is	☐	☐	☐	☐	☐		45A___
	should be	☐	☐	☐	☐	☐		___
To insure confidence of alumni and other financial contributers.	is	☐	☐	☐	☐	☐		47A___
	should be	☐	☐	☐	☐	☐		___
To base faculty promotion and tenure more on an estimate of teaching effectiveness than on the value of scholarly research.	is	☐	☐	☐	☐	☐		49A___
	should be	☐	☐	☐	☐	☐		___

GOALS		of extremely high importance	of high importance	of medium importance	of low importance	of no importance	COMMENTS	For office use only
To intensify efforts to increase the institution's financial resources.	is	☐	☐	☐	☐	☐		51A___
	should be	☐	☐	☐	☐	☐		___
To provide students with opportunities to develop lasting friendships.	is	☐	☐	☐	☐	☐		53A___
	should be	☐	☐	☐	☐	☐		___
To increase the desire and ability of students to undertake self-directed study.	is	☐	☐	☐	☐	☐		55A___
	should be	☐	☐	☐	☐	☐		___
To enable students to develop a set of principles to guide their behavior.	is	☐	☐	☐	☐	☐		57A___
	should be	☐	☐	☐	☐	☐		___
To help students achieve positions of status and leadership in society.	is	☐	☐	☐	☐	☐		59A___
	should be	☐	☐	☐	☐	☐		___
To teach students to espouse and defend a theological position.	is	☐	☐	☐	☐	☐		61A___
	should be	☐	☐	☐	☐	☐		___
To provide a strong professional training in various areas (e.g., law, medicine, business, education, etc.)	is	☐	☐	☐	☐	☐		63A___
	should be	☐	☐	☐	☐	☐		___
To perform applied research for government, business, or industry.	is	☐	☐	☐	☐	☐		11B___
	should be	☐	☐	☐	☐	☐		___
To be responsive to the cultural needs of the local community.	is	☐	☐	☐	☐	☐		13B___
	should be	☐	☐	☐	☐	☐		___
To help formulate programs in a number of public policy areas such as pollution control, urban renewal, and health care.	is	☐	☐	☐	☐	☐		15B___
	should be	☐	☐	☐	☐	☐		___

Page 4 GOALS		of extremely high importance	of high importance	of medium importance	of low importance	of no importance	COMMENTS	For office use only
To help students acquire respect for prevailing political and social institutions in America.	is	☐	☐	☐	☐	☐		17B___
	should be	☐	☐	☐	☐	☐		___
To protect a faculty member against intimidation by those who do not approve of ideas he may present in the classroom.	is	☐	☐	☐	☐	☐		19B___
	should be	☐	☐	☐	☐	☐		___
To innovate in developing educational programs for special categories of students e.g., disadvantaged students, very bright students, foreign students, etc.	is	☐	☐	☐	☐	☐		21B___
	should be	☐	☐	☐	☐	☐		___
To ensure that all those who are affected by an institutional decision have an opportunity to express their views on it before it is made.	is	☐	☐	☐	☐	☐		23B___
	should be	☐	☐	☐	☐	☐		___
To establish and clearly define the purposes the institution will serve.	is	☐	☐	☐	☐	☐		25B___
	should be	☐	☐	☐	☐	☐		___
To make special efforts to attract faculty members who are also members of groups that are in the minority on this campus.	is	☐	☐	☐	☐	☐		27B___
	should be	☐	☐	☐	☐	☐		___
To help students to lead satisfying personal and social lives.	is	☐	☐	☐	☐	☐		29B___
	should be	☐	☐	☐	☐	☐		___
To help students acquire the ability to adapt to new occupational requirements as technology and society change.	is	☐	☐	☐	☐	☐		31B___
	should be	☐	☐	☐	☐	☐		___
To maintain an atmosphere of intellectual excitement among faculty, students, and administrators.	is	☐	☐	☐	☐	☐		33B___
	should be	☐	☐	☐	☐	☐		___
To make sure that the institution receives its share of favorable attention in the mass media.	is	☐	☐	☐	☐	☐		35B___
	should be	☐	☐	☐	☐	☐		___

GOALS		of extremely high importance	of high importance	of medium importance	of low importance	of no importance	COMMENTS	For office use only
To reward excellence in teaching through promotions and salary increases.	is	☐	☐	☐	☐	☐		37B___
	should be	☐	☐	☐	☐	☐		___
To increase the number and diversity of sources of income.	is	☐	☐	☐	☐	☐		39B___
	should be	☐	☐	☐	☐	☐		___
To provide opportunities for students to find marital partners.	is	☐	☐	☐	☐	☐		41B___
	should be	☐	☐	☐	☐	☐		___
To help students acquire depth in at least one area of knowledge.	is	☐	☐	☐	☐	☐		43B___
	should be	☐	☐	☐	☐	☐		___
To provide an opportunity for re-educating and retraining those whose vocational capabilities have become obsolete.	is	☐	☐	☐	☐	☐		45B___
	should be	☐	☐	☐	☐	☐		___
To strengthen the religious faith of students.	is	☐	☐	☐	☐	☐		47B___
	should be	☐	☐	☐	☐	☐		___
To contribute to the advancement of knowledge for its own sake.	is	☐	☐	☐	☐	☐		49B___
	should be	☐	☐	☐	☐	☐		___
To help solve social, economic, or political problems in the immediate geographical area.	is	☐	☐	☐	☐	☐		51B___
	should be	☐	☐	☐	☐	☐		___
To function as an agent of direct social action.	is	☐	☐	☐	☐	☐		53B___
	should be	☐	☐	☐	☐	☐		___
To ensure the right of faculty members to engage in off-campus political activities without fear of reprisal from the institution.	is	☐	☐	☐	☐	☐		55B___
	should be	☐	☐	☐	☐	☐		___

GOALS		of extremely high importance	of high importance	of medium importance	of low importance	of no importance	COMMENTS	For office use only
To ensure faculty participation in institutional decision-making.	is	☐	☐	☐	☐	☐		57B___
	should be	☐	☐	☐	☐	☐		___
To establish a long-range plan for the institution.	is	☐	☐	☐	☐	☐		59B___
	should be	☐	☐	☐	☐	☐		___
To provide some form of education for any student, regardless of his academic ability.	is	☐	☐	☐	☐	☐		61B___
	should be	☐	☐	☐	☐	☐		___
To encourage mutual trust and respect among faculty, students, and administrators.	is	☐	☐	☐	☐	☐		63B___
	should be	☐	☐	☐	☐	☐		___
To encourage students and faculty to compete for prestigious awards such as Rhodes Scholarships, Fullbright Fellowships, etc.	is	☐	☐	☐	☐	☐		11C___
	should be	☐	☐	☐	☐	☐		___
To reward faculty who provide outstanding service to the local or regional area through promotions and salary increases.	is	☐	☐	☐	☐	☐		13C___
	should be	☐	☐	☐	☐	☐		___
To establish a period of the students' lives which can always be remembered for its fun, friendship, and freedom.	is	☐	☐	☐	☐	☐		15C___
	should be	☐	☐	☐	☐	☐		___
To instill in students a respect for knowledge for its own sake.	is	☐	☐	☐	☐	☐		17C___
	should be	☐	☐	☐	☐	☐		___
To help students develop the capacity to assume leadership.	is	☐	☐	☐	☐	☐		19C___
	should be	☐	☐	☐	☐	☐		___
To encourage faculty who teach in the graduate school to perform research.	is	☐	☐	☐	☐	☐		21C___
	should be	☐	☐	☐	☐	☐		___

GOALS		of extremely high importance	of high importance	of medium importance	of low importance	of no importance	COMMENTS	For office use only
To help students develop a dedication to serving God in everyday life.	is	☐	☐	☐	☐	☐		23C___
	should be	☐	☐	☐	☐			___
To provide technical assistance to agencies of the national government.	is	☐	☐	☐	☐	☐		25C___
	should be	☐	☐	☐	☐			___
To enable students to understand the value of dissent in a democratic society.	is	☐	☐	☐	☐			27C___
	should be	☐	☐	☐	☐	☐		___
To allow wide latitude in the choice of topics that faculty members choose for their research as long as the research is conducted in a responsible manner.	is	☐	☐	☐	☐			29C___
	should be	☐	☐	☐	☐			___
To encourage students to view members of various religious groups, minority groups, etc., as individuals rather than as members of a particular group.	is	☐	☐	☐	☐	☐		31C___
	should be	☐	☐	☐	☐	☐		___
To maintain a distinctiveness that sets the institution apart from other institutions.	is	☐	☐	☐	☐	☐		33C___
	should be	☐	☐	☐	☐	☐		___
To assist students to acquire a basic knowledge in the humanities, social sciences, and natural sciences.	is	☐	☐	☐	☐	☐		35C___
	should be	☐	☐	☐	☐	☐		___
To help students develop a respect for their own abilities and an understanding of their limitations.	is	☐	☐	☐	☐	☐		37C___
	should be	☐	☐	☐	☐	☐		___
To provide students with an opportunity to acquire a broad understanding of the variety of occupational possibilities.	is	☐	☐	☐	☐	☐		39C___
	should be	☐	☐	☐	☐	☐		___
To provide research opportunities for the intellectual growth of the faculty.	is	☐	☐	☐	☐	☐		41C___
	should be	☐	☐	☐	☐	☐		___

GOALS		of extremely high importance	of high importance	of medium importance	of low importance	of no importance	COMMENTS	For office use only
To apply the technical expertise available at the institution to the solution of state and regional problems.	is	☐	☐	☐	☐	☐		43C ___
	should be	☐	☐	☐	☐	☐		___
To encourage students to become aware of social problems.	is	☐	☐	☐	☐	☐		45C ___
	should be	☐	☐	☐	☐	☐		___
To permit an undergraduate student wide latitude in selecting the courses he will take toward his degree.	is	☐	☐	☐	☐	☐		47C ___
	should be	☐	☐	☐	☐	☐		___
To give technical assistance to developing nations.	is	☐	☐	☐	☐	☐		49C ___
	should be	☐	☐	☐	☐	☐		___
To maintain an environment of amicable social discourse.	is	☐	☐	☐	☐	☐		51C ___
	should be	☐	☐	☐	☐	☐		___
To provide a wide range of opportunities for specific occupational preparation, e.g., accounting, engineering, pharmacy, etc.	is	☐	☐	☐	☐	☐		53C ___
	should be	☐	☐	☐	☐	☐		___
To help students become aware of the potentialities of a full time religious vocation.	is	☐	☐	☐	☐	☐		55C ___
	should be	☐	☐	☐	☐	☐		___
To have faculty illustrate, by their own behavior, appropriate research models for students.	is	☐	☐	☐	☐	☐		57C ___
	should be	☐	☐	☐	☐	☐		___
To prepare students for service to the community.	is	☐	☐	☐	☐	☐		59C ___
	should be	☐	☐	☐	☐	☐		___
To help students learn how to change society.	is	☐	☐	☐	☐	☐		61C ___
	should be	☐	☐	☐	☐	☐		___

GOALS		of extremely high importance	of high importance	of medium importance	of low importance	of no importance	COMMENTS	For office use only
To permit students to publish their own newspaper without approval of content by the faculty or administration.	is	☐	☐	☐	☐	☐		63C ___
	should be	☐	☐	☐	☐			___
To give technical assistance to agencies for international development.	is	☐	☐	☐	☐	☐		11D ___
	should be	☐	☐	☐	☐	☐		___
To protect valuable traditions against unwarranted change.	is	☐	☐	☐	☐	☐		13D ___
	should be	☐	☐	☐	☐	☐		___
To decentralize decision-making to the greatest extent feasible.	is	☐	☐	☐	☐			15D ___
	should be	☐	☐	☐	☐			___
To reexamine periodically the degree of concensus concerning the institution's purposes.	is	☐	☐	☐	☐	☐		17D ___
	should be	☐	☐	☐	☐	☐		___
To provide a strong program of intercollegiate participation in musical activities, athletics, etc.	is	☐	☐	☐	☐	☐		19D ___
	should be	☐	☐	☐	☐	☐		___
To attract faculty who have distinguished themselves through research and scholarly contributions.	is	☐	☐	☐	☐	☐		21D ___
	should be	☐	☐	☐	☐	☐		___
To provide educational opportunities for adults in the local area.	is	☐	☐	☐	☐	☐		23D ___
	should be	☐	☐	☐	☐	☐		___
To ensure the freedom of students to make their own decisions about dress and personal appearance.	is	☐	☐	☐	☐	☐		25D ___
	should be	☐	☐	☐	☐	☐		___
To avoid having the reputation of the institution damaged by the action of a few students or faculty.	is	☐	☐	☐	☐	☐		27D ___
	should be	☐	☐	☐	☐	☐		___

GOALS		of extremely high importance	of high importance	of medium importance	of low importance	of no importance	COMMENTS	For office use only
To help students develop an appreciation of cultural activities (e.g., literature, art, drama, music).	is	☐	☐	☐	☐	☐		29D___
	should be	☐	☐	☐	☐	☐		___
To provide a supportive environment for highly creative individuals.	is	☐	☐	☐	☐	☐		31D___
	should be	☐	☐	☐	☐	☐		___
To allocate percentages of the total enrollment for minority groups or groups having low socioeconomic status.	is	☐	☐	☐	☐	☐		33D___
	should be	☐	☐	☐	☐	☐		___
To provide a continuing plan of curricular and instructional evaluation for all programs.	is	☐	☐	☐	☐	☐		35D___
	should be	☐	☐	☐	☐	☐		___
To ensure the rights of students to engage in off-campus political activities and social actions without fear of reprisal from the institution.	is	☐	☐	☐	☐	☐		37D___
	should be	☐	☐	☐	☐	☐		___
To assist in efforts to achieve and maintain world peace.	is	☐	☐	☐	☐	☐		39D___
	should be	☐	☐	☐	☐	☐		___
To provide advanced level, adult education courses.	is	☐	☐	☐	☐	☐		41D___
	should be	☐	☐	☐	☐	☐		___
To reward excellence in research and scholarly inquiry through promotions and salary increases.	is	☐	☐	☐	☐	☐		43D___
	should be	☐	☐	☐	☐	☐		___
To help students develop a sense of responsible membership in the world community.	is	☐	☐	☐	☐	☐		45D___
	should be	☐	☐	☐	☐	☐		___
To discover and encourage exceptional scholars and professionals who will attain eminence and bring recognition to the institution.	is	☐	☐	☐	☐	☐		47D___
	should be	☐	☐	☐	☐	☐		___

GOALS		of extremely high importance	of high importance	of medium importance	of low importance	of no importance	COMMENTS	For office use only
To enable the student to see religious significance in all activities.	is	☐	☐	☐	☐	☐		49D___
	should be	☐	☐	☐	☐	☐		___
To help students in the choice of a personally satisfying vocation.	is	☐	☐	☐	☐	☐		51D___
	should be	☐	☐	☐	☐	☐		___
To help students develop the ability to synthesize knowledge from different sources.	is	☐	☐	☐	☐	☐		53D___
	should be	☐	☐	☐	☐	☐		___
To provide a strong intramural athletic program.	is	☐	☐	☐	☐	☐		55D___
	should be	☐	☐	☐	☐	☐		___
To apply cost criteria to curricular and instructional alternatives.	is	☐	☐	☐	☐	☐		57D___
	should be	☐	☐	☐	☐	☐		___
In spite of the length of the above list, it is possible that we have not included goals which you believe are important at this institution. If so, please take this opportunity to correct us by writing them in below.								
	is	☐	☐	☐	☐	☐		___
	should be	☐	☐	☐	☐	☐		___
	is	☐	☐	☐	☐	☐		___
	should be	☐	☐	☐	☐	☐		___
	is	☐	☐	☐	☐	☐		___
	should be	☐	☐	☐	☐	☐		___
	is	☐	☐	☐	☐	☐		___
	should be	☐	☐	☐	☐	☐		___

THANK YOU

Please use the enclosed, self-addressed, reply envelope to return this questionnaire.

APPENDIX C

INSTRUCTIONS FOR THE SECOND

& THIRD ADMINISTRATIONS OF THE IGI

(reduced in size)

EDUCATIONAL TESTING SERVICE – SOUTHEASTERN OFFICE
Mutual Plaza DURHAM, N. C. 27701 Area Code 919–688-8769

March 27, 1970 Instructions for Questionnaire 2

Dear Participant:

The attached questionnaire is the second of three phases of the study which you started last month. We appreciate your participation in the first phase. After completion of this questionnaire, please *return* it in the enclosed envelope *within 5 days* in order that the data may be tabulated in time for the last phase of this study. We hope that we will have your continued cooperation since the study will be severely limited if each individual does not complete all three phases.

You are to rate the same institution as you rated last month. The same goal statements are used. Note that for each goal statement the category that most participants selected on the first questionnaire has been circled. When two categories were selected about equally often, both categories have been circled. We are interested in your opinion of the importance of each goal statement now that you have some indication of how others have responded. Do not be concerned with the responses that you made on the first questionnaire. *The objective of this phase is to identify the reasons for opinions that differ from the majority opinion.* Your task is to react to each goal statement as follows:

First – How important *is* the goal at this institution at the present time? (Consider the institution as a whole in making your judgment.) Then, if the category that you have checked is not the same as the one which is circled, if possible, briefly give one or two important reasons for your opinion in the comments section. If you have checked the circled box, no comments are necessary.

Second – In your judgment, how important *should* the goal *be* at this institution? Then, as above, if the category that you have checked is not the same as the one which is circled, if possible, briefly give one or two important reasons for your opinion in the comments section.

100

GOALS		of extremely high importance	of high importance	of medium importance	of low importance	of no importance	COMMENTS
to assist students to prepare for graduate school	is	☐	☐	☒	☐	☐	A number of graduates have received advanced degrees.
	should be	☐	☒	☐	☐	☐	

In the above example, the participant has indicated that he believes the goal "to assist students to prepare for graduate school" *is* presently of medium importance at this institution, in contrast to most participants who think it is of low importance. The primary reason that he believes this goal is of medium importance is that a number of graduates have received advanced degrees. The person has also indicated that he thinks this goal *should be* of high importance, which agrees with most of the other participants.

The questionnaire should not take longer than 50 minutes to complete. Of course, time will be influenced by the number of comments made. Do not spend undue time on any single goal.

Thank you again for your cooperation.

Sincerely,

Norman P. Uhl

Norman P. Uhl
Research Psychologist

P. S. On the first questionnaire a few participants provided comments about the goal statements and also added additional goal statements. We have found many of these comments invaluable and they will be used both in the further refinement of this questionnaire and in the interpretation of the results of this study. Unfortunately, both the methodology of this study and the practical time problems do not permit us to revise or to add goal statements during the three phases of this study. However, we do appreciate your taking time to make these comments.

EDUCATIONAL TESTING SERVICE – SOUTHEASTERN OFFICE
Mutual Plaza DURHAM, N. C. 27701 Area Code 919–688-8769

April 29, 1970 Instructions for Questionnaire 3

Dear Participant,

This is the third and last questionnaire that you will receive in this study. It is also the *most important*, and should be the most interesting one. It will take approximately one hour to complete. After completion of this questionnaire, please *return* it in the enclosed envelope *within 7 days* in order that the data may be tabulated and analyzed. We hope that we will have your continued cooperation since the study will be severely limited if each individual does not complete this last phase.

This phase differs from the preceding ones in that a separate summary is included giving other participants' reasons for not agreeing with the degree of importance which most people checked (indicated by a red circle). The left hand side of these sheets summarizes the reasons given for marking a category of greater importance than the most frequently selected one (circled in red), while the right hand side summarizes the reasons for marking a category of lesser importance than the most frequently selected one. Only reasons cited by at least two people are included in this summary of minority opinions. Asterisks indicate lack of comments. These sheets of reasons can be placed to the right of the questionnaire so that the numbers on each sheet line up with the numbers in the right margin of the questionnaire page.

Read carefully the procedure given below for answering these two questions:

A. How important *is* the goal at this institution at the present time? (Consider the institution as a whole in making your judgment.)

B. How important *should* the goal *be* at this institution?

When you have read the goal statement: 1) notice the most frequently checked category (those circled in red), and then 2) read the reasons why some people thought the goal more important and why others thought it less important. These reasons are the arguments advanced by those who did not choose the most frequently selected category. After considering these reasons, indicate *your* final response by checking one of the categories. Do not spend too much time on any one goal. The COMMENTS column is available if you desire to supply additional information. *Be sure to make all your responses on the questionnaire since you will not return the reason sheets.*

101

EXAMPLE

GOALS		of extremely high importance	of high importance	of medium importance	of low importance	of no importance	COMMENTS	MORE IMPORTANT THAN AVERAGE RESPONSE	LESS IMPORTANT THAN AVERAGE RESPONSE
to assist students to prepare for graduate school	is	☐	☐	☒	☐	☐		1–many students have been accepted into good graduate programs	**********
	should be	☐	☒	☐	☐	☐		1–should be primary goal of the institution	1–should emphasize preparation for life

In the above example, the participant noticed that most people thought that this goal *is* "of low importance" (red circle). Some participants who thought it was more important than this gave as a reason, "many students have been accepted into good graduate programs." The participant indicated that he felt the goal *is* "of medium importance."

In completing the *should be* section the participant noticed that most people thought that this goal *should be* "of high importance" (red circle). Some participants who thought it was more important than this gave as a reason, "should be primary goal of the institution" while others who thought it should be of lesser importance gave as a reason, "should emphasize preparation for life." The participant indicated that he felt the goal *should be* "of high importance."

The institution, Educational Testing Service, and the Regional Education Laboratory for the Carolinas and Virginia thank you for your outstanding cooperation in this study. With the completion of this third phase, each of you has made a positive contribution to this institution.

Sincerely,

Norman P. Uhl

Norman P. Uhl
Research Psychologist

APPENDIX D

DESCRIPTIONS OF PARTICIPATING INSTITUTIONS

Appendix D

Descriptions of Participating Institutions

INSTITUTION # 1

Institution # 1 is a private, senior, coeducational, predominantly white, church-affiliated, liberal arts college. The university has a faculty of approximately 120 and an enrollment of about 2,000 students. Admission is selective. Average SAT scores for 1968-69 were 539/552.* Eighty-two percent of all students accepted were in the top 40% of their graduating class. About one-half of those entering as freshmen graduate four years later. Costs are $2,700 (tuition, board, room). Financial assistance is available. Approximately 72% received some financial assistance in 1968. A little over 70% live on campus. The school offers a full extracurricular program, with sports being very popular. Religious influence is felt throughout the campus. Weekly chapel and six semester hours of theology are required. Approximately 60% of the faculty have Ph.D.s.

Purpose**

This institution is a coeducational liberal arts college that aspires to academic excellence under Christian influences. It is operated in the belief that the function of a modern liberal arts college is to educate men and women to become responsible citizens and intellectual leaders in the human community. To this end, students are given opportunities to develop inquiring minds, an appreciation for intellectual discipline, and an open-minded delight in freedom of inquiry and pursuit of truth. By stressing the arts and sciences,

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*These are Verbal and Mathematics scores, respectively.

**Taken from the institution's bulletin.

by fostering Christian character, and by emphasizing the value of a broad foundation for specialized careers, the institution aims to develop individual excellence and to prepare students for living as well as for a livelihood.

The basic curriculum is designed to develop in each student a mature proficiency in the use of the English language, an awareness of human history, and an appreciation of man's cultural, scientific, and social achievements. The upper-level courses provide opportunities for concentration in areas of special interest and in certain professional and utilitarian branches of learning. Graduate work at the master's degree level is offered in areas where there are demonstrated needs and appropriate resources.

Distinctive Features

Based on a recent self-study, this institution considers its program distinctive for the following reasons:

1. The faculty concerns itself first with effective teaching, including effective use of the classroom, library, and laboratory.
2. The Christian atmosphere contributes to the development of moral responsibility and spiritual maturity.
3. In keeping with the wishes of its founders, it continues to educate future ministers and lay leaders for the denomination.
4. The size of the college permits the individual to know the whole institution rather than a single school or department. The result is a sense of belonging, of being a part of the whole, yet of retaining one's identity as an individual. Class size permits a relationship among faculty members and students which encourages maximum personal and intellectual development.

5. The total program stimulates the student to develop independence and poise both as a scholar and as a person. Members of the faculty and professional advisory staff are available to give the benefits of their training and experience as a supplement to student initiative.
6. The institution draws students from a wide cross-section of economic, social, and cultural backgrounds, both from within and without the region, and from various races, nationalities, and faiths.
7. The primary role of the college is to provide an undergraduate program of high quality. Even though research is being done by many members of the faculty, the primary emphasis is upon teaching. Research activities are considered necessary to keep the faculty members on the "cutting edge" of their discipline in order to enhance the teaching function.

INSTITUTION # 2

Institution # 2 is a private, senior, coeducational, predominantly white, church-related, liberal arts college. The college has an enrollment of about 1,600 students and a faculty of about 100. Sixty percent of all applicants are accepted. Mean SAT scores are 468/486. Two-thirds of the freshmen were in the top half of their graduating class. Costs are approximately $2,650 for a resident. Seventy-five percent of all students live on campus. Some financial aid is available. Approximately 20% of the faculty have Ph.Ds.

Purpose*

This institution is committed to the Christian-democratic principle

*Taken from the institution's bulletin.

that every individual is of infinite worth within the brotherhood of mankind. On the basis of this principle, its paramount objective is to enable the student to achieve the highest possible degree of self-realization and to make his greatest contribution to human welfare.

The college endeavors to provide a program of liberal education, including a sound core of general studies consistent with the needs of youth in contemporary society, and such vocational courses as are in keeping with its resources and objectives.

The college believes that its objectives can best be attained by striving for the following goals:

1. To provide a program of studies which will enable the student to attain his maximum intellectual development and broaden his outlook on life.
2. To foster and maintain a meaningful religious life which will deepen the student's insights into the spiritual significance of his own and all life.
3. To enhance the student's understanding and appreciation of what is excellent in life and to encourage him to strive for it.
4. To help the student to know himself and to become a physically healthy, emotionally mature, and socially adjusted person.
5. To assist the student in selecting and preparing for a satisfying vocation.
6. To help the student become a well-integrated, responsive, and responsible member of a democratic society striving to promote the universal fellowship of men under the fatherhood of God.

INSTITUTION # 3

Institution # 3 is a public, senior, coeducational, predominantly black university. It has an enrollment of about 3,000 students and a faculty of about 250. Average SAT scores of entering freshmen are 350/374. Students are given a good deal of freedom. Class attendance is not required. Few students live on campus. 1968-69 costs were $1,400 (tuition, room, and board) for a state resident. An additional $400 is required for out-of-state students. Financial aid is also available for many students. Approximately 40% of the faculty have Ph.D.s.

Purpose*

This is a recently created regional university. Through the undergraduate offerings (and to some extent through the graduate and professional programs) attention is directed to the achievement of the following objectives:

1. Development of perspective and intellectual strength for the endeavor of a lifetime.
2. Acquaintance with our cultural heritage as a background for understanding and relating to the existing social order.
3. Provision of a climate for high-quality learning with special emphasis on education for knowledgeable, intelligent, responsive participation in the home, the community, and a career.
4. A liberal education with a number of opportunities in specialized education so that students are prepared to pursue various professional careers with confidence and competence.
5. Recognition of the need for continuous learning throughout one's life in order to be effective, responsible citizens in a rapidly changing society.

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*Taken from the institution's bulletin.

INSTITUTION # 4

Institution # 4 is a public, coeducational, predominantly white, major university established originally as a land-grant institution with original responsibility in the area of "agriculture and the mechanics arts." It is now composed of eight academic areas, a graduate school, and conducts research and extension programs throughout the state. It has an enrollment of about 11,000 students of whom approximately 2,000 are engaged in graduate study and a professional staff of over 1,000. Average SAT scores of entering freshmen are 491/589 and 95% were in the top one-half of their graduating class. Fifty percent of all applicants are accepted. Students are given a good deal of freedom. Most undergraduates live on campus. Costs are approximately $1,400 (tuition, room, and board) for a state resident. Financial aid is available for many students. Faculty are well qualified.

This institution is dedicated to serving the state and nation through instruction, research, and extension. To accomplish this, there are eight undergraduate schools, more than 70 degree programs, the graduate school and numerous special research centers, institutes and interdisciplinary education, research and extension programs.

INSTITUTION # 5

Institution # 5 is a public, senior, coeducational, predominantly white, urban university. It has an enrollment of about 10,000 students and a faculty of approximately 450. Mean SAT scores are 420/450. Ninety-two percent of all applicants are accepted. Forty-three percent of the freshmen were in the top 40% of their high school graduating class. Approximately 50% are part-time students. Costs are approximately $200 for

tuition. Almost no financial aid is available. Only 10% of entering freshmen graduate four years later.

Purpose*

The purpose of this institution is to enrich the life of the community, the state, and the nation by seeking to develop in its students the imagination, intelligence, and awareness of values which will enable them to assume places of leadership in a rapidly expanding society. The university offers each of its students opportunity and encouragement to acquire, to his fullest capability, the knowledge and understanding necessary to meet the problems and to secure the advantages of life. The institution believes that the best means of achieving these objectives is a firm grounding in the liberal arts, both as a basis for advanced and specialized study and for total development of the individual. Consequently, a substantial core of liberal arts subjects is required for each degree offered. The university offers the privilege of attendance to every qualified person who wishes to make use of its facilities to develop and refine his abilities.

While regarding the dissemination of knowledge as one of its basic objectives, the university also places high value upon the creation of knowledge. A primary function of the university is to stimulate the creative impulses of faculty and students so that significant intellectual advances may be made through the various channels of research. While new knowledge is discovered through the personal and creative study of the faculty, the student has professional guidance in the initial stages of his own

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*Taken from the institution's bulletin.

scholarly investigation.

The institution also seeks to serve the community in a direct and immediate way through its faculty and students, who are encouraged to participate in the social and cultural life of the area. Thus the university attempts to extend itself beyond the boundaries of the campus and to become a significant and constructive force in the community.

APPENDIX E

DETAILED PROCEDURE OF STUDY

Appendix E

Chronological Procedure of Study

The time schedule for this project was extremely critical since three questionnaires had to be administered, one each at the beginning of March, April, and May, and data from the preceding questionnaire needed to be analyzed for use on the following questionnaire. This appendix presents chronologically the steps employed in this study.

I. November, 1969

A. Constructed a schedule for the administration and processing phases of the project.

B. Investigated local printing and processing firms and identified one which could produce the work according to the study's critical time schedule.

C. Worked with RELCV in identifying institutions which would represent differences on the following dimensions: public - private, university - college, sectarian - nonsectarian, and predominantly Negro - predominantly Caucasian. Developed list of first five choices and five alternates.

II. December, 1969

A. Visited chosen institutions to explain project and elicit their participation. Asked each president, who was interested in participating, to assign an individual to serve as liaison with the project director, this individual to receive $100 honorarium for his assistance.

III. January, 1970

A. Contacted liaison person on each campus by telephone or personal

visit to explain project and request the following information:

1. College catalog
2. Current list of faculty
3. Current list of department chairmen
4. Current list of administrators
5. Current list of junior and senior students, excluding transfers, giving their major, sex, class, and local mailing address
6. At one institution, current list of graduate students who had been on campus at least one year to include major, sex, and local mailing address
7. List of active trustees and their addresses
8. List of active alumni such as alumni officers and their addresses
9. List of students who were members of minority racial and ethnic groups
10. List of names and addresses of members of off-campus groups (different religious, political, vocational groups, in addition to prominent community members such as mayor, local newspaper editors)

B. Received information from liaison person usually in the form of computer printouts, faculty and staff directories, and college catalogs. (The community group was identified, when possible, using the following categories: community leaders, political leaders, active religious leaders, and leaders in minority groups)

C. Selected faculty from the faculty and staff directories, drawing a random sample stratified by department and excluding department chairmen. Approximately 25 faculty members were selected in each

institution, except for Institution 4, the largest institution, where 45 faculty were selected.

D. Selected administrators, including department chairmen, deans of any schools or divisions, Dean or Vice President for Academic Affairs, President, and provosts. If an institution had more than 40 classified in the above categories, random sampling of department chairmen was employed.

E. Selected trustees and alumni from the lists provided by the liaison person, choosing randomly the desired number.

F. Selected approximately 250 students from the undergraduate and graduate group lists supplied by the liaison person. A random sample stratified by department and sex was drawn, and these students were mailed a double postcard. On one-half of the postcard was a description of the project and an offer of a $10 honorarium for those chosen to participate. On the other half, which was an addressed postcard, the students indicated whether they would like to be considered as a possible participant and were asked to give their local address from March through May. They were instructed to tear off this part and mail it. Almost all cards were returned indicating a willingness to participate. From these cards a random sample was selected, stratified by sex and major. In addition, five students were selected who had been classified as members of minority groups on campus.

G. Selected parents, at two institutions, of the students participating in the study. At these two institutions, the student was asked to give the name and address of one of his parents

on the postcard that was returned. If a student selected to participate in the study had given the name and address of a parent, that parent was included. Of the 111 students selected at these two institutions, 103 gave the name of a parent.

H. Prepared a cover letter for each president's signature. This letter accompanied the first questionnaire and indicated the president's support of the study.

I. Prepared a cover letter signed by the project director. This letter also accompanied the first questionnaire and explained the purposes of the study. Letters with different emphases were prepared for different groups. Each letter had a personal heading.

J. Prepared follow-up letter for those not returning questionnaire within five days.

K. Conducted a pilot study to test feasibility of using separate optical scan answer sheet. Results were negative.

L. Prepared instructions to accompany the first questionnaire.

M. Ordered envelopes for use in mailing and returning questionnaires and for follow-ups.

IV. February, 1970

A. A printer made copies of the IGI.

B. A commercial letter service was employed to:

1. make copies of the president's letter
2. prepare the letters referred to in (III.I.) above, with an autotypewriter, typing in manually the personal headings and greeting on each letter
3. make mailing labels for all mailings including follow-up

letters

4. collate copies of the IGI
5. make copies of the follow-up letter
6. prepare return envelopes (address and correct postage)
7. pack envelopes with IGI and instructions for the first questionnaire, president's letter, ETS letter for that group, and return envelope
8. mail envelopes to participants in order that they would be received on or before 1 March

C. Commercial letter service operation was supervised by research assistant.

D. Every envelope was checked for correct contents and address before mailing.

E. Operational plans for processing returned questionnaires were set up, to include:

1. checking on a master list the return of a questionnaire in order that at the end of each day it would be known who had and had not returned one
2. writing a preassigned identification number on the first two pages of each questionnaire
3. keeping the questionnaires for the five schools separate
4. removing the first page, which included the individual's name, from each questionnaire to ensure anonymity of responses (The identification number which was placed on second page included all data given on first page except name, in addition to coding the school, the response group, sex, individual code, and questionnaire number.)

5. mailing follow-up letters to all participants whose questionnaire had not been received by 6 March
6. coding responses to each goal statement from 1 to 5 in the space provided in the margin of the questionnaire to assist keypunchers
7. arranging for local keypunching service to keypunch and verify 1000 questionnaires in 24-hour period
8. reading comments and examining added goals
9. writing and testing computer program to calculate number of respondents per group and to calculate modes in an output format which could be easily used by the printer in preparing the feedback for the next questionnaire
10. arranging with the printer for printing the second questionnaire
11. preparing the instructions for the second questionnaire after having reviewed returns of first questionnaire

V. March, 1970

A. Followed above plan (IV.E.) for processing first questionnaires.

B. Repeated steps (IV.A.) through (IV.D.) for the second questionnaire with the following modifications.

1. The president's and ETS's cover letters were not included.
2. The packets were mailed to participants in order that they would be received on or before 1 April and a follow-up letter was mailed on 4 April.

C. The operational plan for processing the second questionnaire was the same as given in (IV.E.) except for the following.

1. Arrangements were made for all minority comments to be recorded

and then summarized for each goal statement separately for "IS" and "SHOULD BE" and separately for each school. Plans were made for three research assistants working full time for 10 days to record the goal comments while the project director and one research assistant summarized the comments for use on the third questionnaire.

2. Arrangements were made to provide the feedback of these comments for each goal statement separately for "IS" and "SHOULD BE", as well as placing the comments under the headings, "More Important Than the Average Response" and "Less Important Than the Average Response." The design of the summaries was to provide feedback which could be easily lined up with the IGI (matching comments with the appropriate goal statement).

VI. April, 1970

A. Followed above plan (V.B.) for processing second questionnaire.

B. Repeated (V.B.) for the third questionnaire with the following modifications.

1. The president's cover letter was included.

2. The packets were mailed on or before 1 May and a follow-up letter was mailed on 6 May.

C. The operational plan for processing the third questionnaire was the same as given in (IV.E.) with the exception that this was the last questionnaire.

VII. May, 1970

A. Followed above plan (VI.C.) for processing third questionnaire.

VIII. June, July, August, 1970

A. Set up disc and tape files.

B. Analyzed data for reports to institutions.

C. Developed computer programs to assist in (VIII.B.) with printouts that could be used directly in the reports.

D. Developed report for each institution which included:

1. the number of participants completing the questionnaire by group
2. a profile of the present and preferred importance given to each goal area
3. a comparison of their present and preferred profiles with those of the other participating institutions
4. the mean and standard deviation of the present and preferred importance of each goal area and of each goal statement by response group and by all respondents for each questionnaire
5. a ranking of goal areas and goal statements according to their present and preferred importance by response group and by all respondents
6. a ranking of goal areas and goal statements according to the magnitude of discrepancy between present and preferred importance by response group and by all respondents
7. a plot for each goal area indicating each group's mean importance rating for each questionnaire. This usually indicates whether convergence occurs.
8. the same analyses (VIII.D.1.-7.) performed for all institutions combined

IX. September, October, 1970

A. Met with liaison personnel to explain results.

B. Set schedule for visits at each institution to explain results to president and others.

C. Determined visiting team.

1. ETS representatives

2. RELCV representatives

3. Consultant

X. November, December, 1970; January, February, 1971

A. Analyzed data for final report.

B. Prepared final report for review by ETS and RELCV.

C. Revised final report on the basis of the review.

D. Prepared an article for publication.

APPENDIX F

CORRELATIONS AMONG GOAL AREAS FOR ALL INSTITUTIONS

BASED UPON DATA COLLECTED FROM QUESTIONNAIRE 3

APPENDIX F

CORRELATIONS AMONG GOAL AREAS FOR ALL INSTITUTIONS BASED UPON DATA COLLECTED FROM QUESTIONNAIRE 3*

Goal Areas		Goal Areas 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Financial Soundness	1	40	36	35	46	-07	56	-27	-24	-14	-30	15	10	19	19	32	39	41	54
Nonacademic Activities	2	33	62	41	60	15	60	-11	-12	-11	-18	34	29	40	40	32	47	40	49
Intellectual Development	3	37	38	37	75	37	48	01	05	19	-09	58	52	51	60	68	50	74	50
Personal Development	4	32	67	51	49	20	73	-21	-15	-01	-27	53	45	57	60	68	62	75	67
Vocational Preparation	5	33	40	41	43	56	-17	56	54	58	47	42	35	30	27	32	14	28	05
Religious Orientation	6	09	54	13	48	-02	60	-49	-46	-38	-51	23	15	40	35	40	51	49	64
Graduate and Professional Training	7	29	18	31	18	65	-22	50	83	48	77	12	18	14	-05	04	-17	-01	-15
Research	8	24	06	33	12	59	-33	77	48	49	85	18	26	24	-04	10	-13	10	-06
Local and Regional Service	9	36	18	33	32	64	-24	58	60	51	47	37	24	05	15	23	02	21	-15
National and International Service	10	05	04	13	11	49	-38	63	71	60	66	13	09	17	-18	-03	-16	-01	-16
Social Criticism	11	27	39	53	50	43	09	22	29	49	28	42	56	41	51	53	44	59	28
Freedom	12	09	00	35	09	12	-20	15	26	22	24	48	19	46	60	49	35	52	30
Innovation	13	24	24	40	30	42	-03	33	36	45	30	56	44	23	46	49	39	50	48
Governance	14	12	14	32	23	27	-12	20	28	39	32	52	65	56	13	56	37	56	32
Self-Study and Planning	15	49	40	44	50	33	26	20	11	33	-05	40	12	31	23	39	42	73	47
Egalitarianism	16	26	49	54	52	41	23	19	17	33	14	61	33	46	38	35	45	50	48
Esprit and Quality of Life	17	46	35	51	49	41	11	27	25	41	15	50	31	47	36	47	49	40	59
Concern for Good Image	18	61	57	40	52	45	37	30	21	33	03	31	-05	22	09	54	32	44	35

*The upper half of the correlation matrix (those values above the diagonal) presents the correlations based upon ratings of present importance, while the lower half (those values below the diagonal) presents the correlations based upon ratings of preferred importance. The values in the diagonal (underlined) represent the correlation of the ratings of present and preferred importance for each goal area. Decimals have been omitted.

APPENDIX G

BIBLIOGRAPHY OF STUDIES RELATED TO THE DELPHI TECHNIQUE

Appendix G

Bibliography of Studies Related to the Delphi Technique

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